




 Ana Luísa Costa Tavares<sup>1</sup>  
 Jessiane Caroline Teixeira<sup>1</sup>  
 Helena Siqueira Vassimon<sup>2</sup>  
 Waldemar Galante Junior<sup>1</sup>

<sup>1</sup> Universidade Paulista ,  
Departamento de Ciências da  
Saúde. Ribeirão Preto, SP, Brasil.

<sup>2</sup> Prefeitura Municipal de Ribeirão  
Preto , Divisão de Alimentação  
Escolar. Ribeirão Preto, SP, Brasil.

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**Correspondence**  
Ana Luísa Costa Tavares  
analuctav@gmail.com

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## ***Challenges in the articulation between family farmers and public managers in food supply to the PAA and PNAE: a case study***

### **Desafios na articulação entre agricultores familiares e gestores municipais no fornecimento de alimentos ao PAA e PNAE: um estudo de caso**

#### **Abstract**

**Introduction:** Family farming plays a crucial role in ensuring food security, promoting environmental sustainability, and fostering cultural diversity. It is central to public policies such as the Food Acquisition Program (PAA) and the National School Feeding Program (PNAE). **Objective:** To evaluate the contributions and challenges faced by an association of family farmers and social and nutrition managers in supplying food for the PAA and PNAE in a municipality in the interior of São Paulo. **Method:** A qualitative case study was conducted using Bardin's content analysis. The sample was intentionally selected and included three actors: a PAA representative, a nutritionist who manages the PAE in the municipality, and a farmer from the land settlement. Semi-structured interviews were conducted remotely, and the interviews were subsequently transcribed for analysis. The analysis was conducted in three stages: pre-analysis, exploration of the material, and treatment of the results. The data were coded and classified into three main categories: operational and logistical difficulties, lack of technical and administrative support, and participation in public policies. **Results:** The results indicated that the interruption of the PAA caused significant difficulties in disposing of agricultural products, compelling farmers to seek alternative commercialization channels. The municipal PAE, however, faces challenges such as a lack of communication among social actors, point-to-point delivery issues, and ineffective publicization of public calls. **Conclusions:** It is evident that greater communication among actors and technical support is crucial for effective program execution. This study contributes to the debate on public food security policies and the inclusion of family farming.

**Keywords:** Agriculture. Food and Nutrition Security. Nutrition and Food Programs and Policies. School Meals.

#### **Resumo**

**Introdução:** A agricultura familiar tem papel crucial na segurança alimentar, sustentabilidade ambiental e diversidade cultural, sendo central em políticas públicas como o PAA e PNAE. **Objetivo:** Avaliar as contribuições e desafios

enfrentados por uma associação de agricultores familiares, gestores sociais e de nutrição no fornecimento de alimentos para o PAA e PNAE em um município do interior paulista. **Método:** Foi realizado um estudo de caso de abordagem qualitativa, com base na Análise de Conteúdo, de Bardin. A amostragem foi intencional e incluiu três atores: um representante do PAA, um nutricionista gestor do PAE no município e um agricultor do assentamento agrícola. Foram realizadas entrevistas semiestruturadas de forma remota, com transcrição posterior para análise. A análise seguiu três fases: pré-análise, exploração do material e tratamento dos resultados obtidos. Os dados foram codificados e classificados em três principais categorias: dificuldades operacionais e logísticas, falta de suporte técnico e administrativo, e participação nas políticas públicas. **Resultados:** Os resultados revelaram que a interrupção do PAA causou grandes dificuldades para o escoamento da produção agrícola, forçando os agricultores a buscarem canais alternativos de comercialização. Já o PAE municipal apresenta desafios como a falta de diálogo entre os atores sociais, entrega ponto a ponto e divulgação ineficaz dos editais de chamada pública. **Conclusões:** Evidencia-se que maior diálogo entre os atores e suporte técnico é essencial para a melhor execução dos programas. Este estudo contribui para o debate sobre políticas públicas de segurança alimentar e a inclusão da agricultura familiar.

**Palavras-chave:** Agricultura. Segurança Alimentar e Nutricional. Programas e Políticas de Nutrição e Alimentação. Alimentação Escolar.

## INTRODUCTION

The Green Revolution, which began in the 1960s, aimed to increase global agricultural production to eradicate hunger.<sup>1</sup> Nevertheless, it did not fully achieve this goal and led to consequences such as the depletion of natural resources due to the intensive use of monocultures, mechanization, and pesticides.<sup>2</sup> Today, it is pivotal not only to focus on increasing production but also on improving food quality, reducing social inequalities,<sup>3</sup> and respecting the environment.

Food production must be safe, healthy, and equitably distributed, as inadequate diets perpetuate poverty and increase health costs.<sup>4</sup> According to Silva et al.<sup>5</sup> in addition to quantitatively and qualitatively assessing the nutrients available to the population, it is necessary to consider the conditions under which these nutrients are consumed. The Food and Agriculture Organization of the United Nations also emphasizes that nutrition-sensitive food systems must increase the availability of food sustainably and accessibly, taking into account diversity and nutritional characteristics.<sup>6</sup>

Hence, family farming is essential to guaranteeing food and nutrition security (FNS), ensuring access to quality food without compromising other basic needs.<sup>7</sup> It involves sovereignty and subsistence for various communities, facilitating a more sustainable and equitable environment, and provides high-quality, diversified food from preserved natural environments while seeking to ensure the right to food security, strengthen the domestic market, protect biodiversity, and preserve cultural traditions.<sup>8</sup>

Public policies such as the Food Acquisition Program (PAA) and the National School Feeding Program (PNAE) are crucial for including family farmers in institutional markets. The PAA, created in 2003 by Law No. 10.696/2003,<sup>9</sup> was established to guarantee a market for family farmers and contribute to the FNS of vulnerable populations.<sup>10</sup> The acquired products are distributed to social institutions, popular restaurants, and food banks.<sup>11</sup>

In 2009, Law No. 11,947<sup>12</sup> was passed, which regulates the procurement of family farming products for the PNAE. This law marked significant progress in public procurement by prioritizing the involvement of land reform settlers and traditional communities. To participate in both programs, family farmers needed to be registered at the Individual Taxpayer Registry of the Brazilian Ministry of Finance, have a Declaration of Eligibility for the National Program for Strengthening Family Farming, and produce their own food.<sup>11,13</sup>

Nevertheless, the inclusion of family farmers, particularly agrarian land reform settlers, in public policies aimed at supply (e.g., PNAE and PAA), faces several challenges that hinder the full participation of family-based producers in institutional markets, restricting their contribution to local development and the sustainability of food chains.

The challenges range from farmers' lack of awareness about the programs to the complexity of the food delivery and production process.<sup>14</sup> The organization and mobilization of farmers are crucial challenges since many are unaware of the legal requirements and face difficulties adapting to the norms demanded by the public calls, which are essential for the participation of family farming in the PNAE.

Another challenge is the infrastructure needed to integrate small family farmers into institutional markets.<sup>15</sup> Barriers such as the lack of certification, the necessary documentation (i.e., the Declaration of Eligibility for the National Program to Strengthen Family Farming), and the bureaucratic complexity of the public procurement process make it challenging for producers to be included.

Lastly, various researchers have reported the flaws in the connection between farmers and the public food sector.<sup>16-19</sup> For instance, municipal management exhibits weaknesses in applying the criteria outlined in the legislation, especially regarding menu planning and the implementation of public calls. These

management and planning issues result in the low acquisition of food from family farming, thereby limiting its contribution to municipal food supply and the promotion of FNS.

Given this context, this study aimed to assess the contributions and potential challenges faced by an association of family farmers and social and food managers in supplying food for the PAA and PNAE in inland São Paulo.

## METHOD

The study and the informed consent form were approved by the Ethics Committee of Universidade Paulista (CAAE no. 51221521.0.0000.5512). A qualitative approach was employed to address questions concerning the operationalization of the PAA and the school feeding program (PAE) in the municipality and the challenges associated with this process. The research was guided by the hypothesis that a lack of communication, combined with operational and logistical challenges, negatively impacts the participation of family farming in the municipality's food supply programs.

The research was conducted in the municipality of Orlândia, located in São Paulo State, within the micro-region of São Joaquim da Barra and the meso-region of Ribeirão Preto. Orlândia is a medium-sized city with 38,319 inhabitants, a population density of 131.34 inhabitants per km<sup>2</sup>, an area of 291.765 km<sup>2</sup>, and a municipal human development index of 0.780, according to the 2022 Census.<sup>20</sup>

Participants were selected through purposive sampling, focusing on individuals involved in the operationalization of the programs. They included the main representative of the land settlement, a nutritionist who manages the Orlândia PAE and is responsible for drawing up public calls and planning school menus, and a representative for the social assistance institutions connected to the municipal PAA, selected due to the individual's direct contact with settlers and responsibility for receiving the donated food (Table 1).

**Table 1.** Profile of interviewees according to representation, sex, level of education, position, weekly workload, and length of experience with the policies studied. Orlândia-SP, 2025.

Representation	Sex	Level of education	Position	Weekly workload	Length of experience with the policies studied
Land Settlement	Female	Incomplete high school education	Principal	Full time	16 years
Social Assistance Network	Female	Complete higher education	Technical advisor	40h	2 years
National School Feeding Program	Female	Complete higher education	Nutritionist	30h	17 years

Source: The authors, 2025.

Semi-structured interviews were conducted remotely, via telephone or video call, to ensure the safety of participants and comply with the social distancing guidelines recommended by the Ministry of Health during the COVID-19 pandemic. The interviews were recorded with the consent of the participants and transcribed in full, with review conducted solely by the interviewers. The questions were derived from

previously published studies,<sup>21,22</sup> and an interview guide, pilot-tested with a qualified professional, was utilized for data collection. During interviews, data collectors maintained field notes to capture relevant information, including participant names, roles, subjective impressions, and the chronological order of reported events.

Each interview was conducted in one remote session, lasting an average of 40–60 minutes. Interviewers underwent specific training to standardize the data collection process. Data was analyzed using Bardin's content analysis method,<sup>23</sup> which involves a systematic analysis of qualitative data through coding and categorization.

The analysis process was divided into three phases: pre-analysis, data exploration, and treatment and interpretation of information using the thematic content analysis technique. Eleven codes were recorded, three of which were addressed by all interviewees: *difficulties with deliveries, production flow, and lack of communication*. Based on these codes, a categorization process was conducted, grouping the codes into three main categories: (1) Operational and logistical difficulties; (2) Lack of technical and administrative support; and (3) Participation in public policies.

## RESULTS

The interviews were conducted between March and April 2022. Excerpts are provided from the statements and ideas expressed by the interviewees, whose identities will remain confidential to protect their anonymity. Participants are identified by the entity they represent, with RA being for the land settlement representative, RS for the social assistance network representative, and RE for the National School Feeding Program representative.

### Interview with the representative of the land settlement

The interview with the RA began with a characterization of the settlement. The RA reported that 29 families live in the settlement, with 14 owning their land and 15 living in aggregate.

The RA was then asked to describe food production in the settlement. A major decline in production was identified starting in 2020 when the PAA was discontinued in the municipality, causing the loss of one of their primary commercialization channels. Despite this, production continues in small quantities to supplement family income, with food being sold from door-to-door.

One of the critical points reported by the RA was the lack of a closer relationship with municipal managers, which would allow for aligning interests and strategizing in ways that benefit both sectors. When asked about their interest and feasibility in participating in the Orlândia PAE, the RA stated that they had attempted to participate on previous occasions and that, if possible, this would be an excellent commercialization channel for them.

However, according to the RA, the greatest challenge encountered in this process is the lack of adequate transportation. Delivery to the PAE in Orlândia is decentralized, meaning that farmers are responsible for distributing food to all schools rather than a single location. "If we had a specific place like we used to have in the pilot kitchen, if we could deliver it to one place and they (the City Council) could distribute it themselves, it would be even more viable" (RA).

Another difficulty reported by the RA is staying informed about the publication of public calls for proposals, resulting in them often discovering the publication after the deadline for submitting a sales project has passed. "Most of the time, by the time we see it, it's already too late" (RA).

In general, the RA demonstrated familiarity with legislation aimed at family farmers, citing the mandatory purchase of 30% of foodstuffs from family farmers and noting that their status as municipal farmers gives them legal priority in decision-making processes.

The RA also suggested that improved communication between sectors could be achieved if municipal representatives visited them more frequently.

They know there's a settlement in the city, and they know the leaders. They have the phone numbers of most of us. So, I think it would be interesting to send us an email informing us of a (public call), and when it's going to start. Especially because we have the preference for being in the municipality. (RA).

Additionally, the RA expressed interest in expanding production, including minimally processed foods, as this practice appeals to several municipalities and such products have greater added value in the commercialization process. "We have a project in the training center for us to adapt the big house and do this, pack a cassava, make pepper" (RA).

Despite the difficulties, the RA emphasized satisfaction in contributing to food production for the municipality and expressed that the work carried out during the PAA was very rewarding.

We know how many children ask their parents for fruit and vegetables and don't get any. We have the opportunity to plant and give it to them (City Hall) to deliver to needy families...it's very rewarding. (...) We know how difficult it is to buy food in the supermarket today. (RA).

## **Interview with the representative of the social assistance network**

The interview with the RS sought to understand how the PAA program functioned while it was operational and what contributions it made to the beneficiary entities.

The RS explained how families in need of support are identified, with various municipal bodies and associations collaborating to assess these families' situations and determine the best ways to address their needs.

We work closely with the Municipal Development Department. The first step, when a family approaches us, is to verify their situation with the department to see if they are already registered (...) and know if they indeed reside in the municipality, for how long, and if they are employed. (...) We maintain a strong relationship within the municipality with the Fraternal Christian Aid (FAC), which also engages in social services. We function like a network. (RS).

The interview continued with a focus on understanding how food was delivered by the farmers of the land settlement and the subsequent distribution of this food.

Every Tuesday morning, the farmers delivered the food. It wasn't in large quantities, but they contributed what they could. We would receive, weigh, and sort the food before distribution. Initially, the food was sent to the Casa de Apoio in Barretos, the Casa de Acolhimento in the municipality, and the Asilo. After that, it was given to the needy families who collected it from the Social Fund. (RS).

When inquired about the current situation, the RS noted that no more deliveries occur, with the last one happening on December 15, 2020. Questions were raised about potential challenges limiting the quantity and variety of food produced. The RS observed that only a small number of producers were interested in the project.

I realized not everyone is interested in this program. We noticed greater participation by women and a lack of diversification and planning. I believe there should be someone to encourage and guide them with more technical knowledge, which could aid in daily production. (RS).

It was also mentioned that, at the time, the municipality provided transportation to collect the produce and deliver it to the city, with all food being received and distributed at a central location.

Another extensively discussed issue was the program's contribution to generating income for farmers and its impact on reducing the social vulnerability of the settler community.

I think it provided a financial option, allowing them to grow through this program, establish themselves, and access other favorable conditions. But now, it seems they're back to square one. (RS).

Lastly, discussions were held regarding the acceptance of produce from the land settlement by the population. The RS asserted that the beneficiary entities and the most impoverished families greatly benefited from these food donations, and the program significantly increased access to healthy food.

### **Interview with the representative of the Orlândia PAE**

The interview with the RE provided insights into the operations of the Orlândia PAE from the perspective of the implementing entity. The RE explained that several factors are considered when developing the school menu, including the socio-economic characteristics of the students and the regionally available food supplies.

It's not just about meeting the students' needs during the school term but also working on the student's food education. We realize that there are many students in the municipality whose only meal is at school. (...) Based on this, we anticipate the menu and attempt to align it with the products that family farmers have available. (Representative of the Orlândia PAE).

The RE noted that local producers are not highly involved in the Orlândia PAE and often do not participate in public calls.

We even got in touch with SEBRAE (Serviço de Apoio às Micro e Pequenas Empresas [Brazilian Micro and Small Business Support Service]), seeking assistance to survey the number of farmers in the municipality, yet they show little interest in taking part in public calls. (Orlândia PAE representative).

When questioned about the low interest among producers in participating, the RE stated that discussions with some farmers revealed apprehensions about not receiving payment and challenges with issuing invoices. “Not to mention that our deliveries are point-to-point, so the farmer has to have at least one truck or car that has its own place to store the products” (Representative of the Orlândia PAE).

Regarding this issue, the RE emphasized that under current conditions, centralizing deliveries to a single point was impractical.

At this point, such distribution becomes infeasible and increasingly complex. In the past, deliveries were managed from the pilot kitchen, but presently, with outsourced transportation and rising demand, it has become more challenging. (PAE representative from Orlândia).

Topics related to menu planning, food demand, and delivery schedules were also discussed. According to the RE, deliveries typically occur weekly or biweekly. The municipality received proposals from neighboring municipalities such as Restinga (São Paulo State), although only once did local producers participate in a public call.

We had a settlement from the municipality that took part in a public call, but unfortunately there was very heavy rain during the first delivery and they even told me in writing that they lost all their crops, so it's difficult for them as well as for us. (PAE representative from Orlândia).

When asked about the financial costs of food purchases funded by the National Education Development Fund, the RE noted that costs are significantly high and continue to escalate.

This year has been particularly concerning due to the pandemic. Prices have increased substantially, nearing previous total expenditures of around 1.2 million, and we've yet to conclude the first semester. (PAE representative from Orlândia).

Additionally, potential partnerships with agronomy and related sectors were discussed to collaboratively develop an agricultural calendar. However, the RE indicated the absence of a formal partnership but acknowledged its potential benefits, especially in offering training for producers.

We don't actually have this partnership, but we are looking to map farmers in the municipality. (...) But I believe that the partnership would be interesting, even because there could be more training, more guidance for farmers so that they feel more confident participating. (Representative of the Orlândia PAE).



The interview sought to understand the main challenges faced by local producers attempting to sell to the Orlândia PAE from the RE's perspective. The producers reportedly struggle with a lack of specialized technical advice, hindered compliance with public call schedules, and other health and hygiene requirements. Additionally, they face difficulties in establishing the selling price.

## **DISCUSSION**

### **Operational and logistical difficulties**

In all three interviews, operational and logistical difficulties emerged as major obstacles to purchasing from family farmers. Soares et al.<sup>24</sup> also identified that climatic problems were related to difficulties in maintaining regular supply. This situation is especially critical for family farming because producers often lack the resources and infrastructure needed to mitigate climate impacts, such as efficient irrigation systems or greenhouses to protect crops.

Furthermore, the absence of infrastructure and adequate logistical support, including vehicles for transportation and a distribution center, compromises the participation of small producers and the regularity of food distribution. Brito and colleagues<sup>25</sup> noted that the lack of proprietary transportation and the requirement to outsource freight present significant obstacles for cooperatives and producer associations. This limitation is exacerbated by the distance between rural communities and delivery points, which increases the cost and logistical complexity of the process. This underscores not only the precariousness of communication between farmers and the program's managers but also the lack of logistical support from the municipality.

### **Lack of technical and administrative support**

The lack of technical advice is another critical aspect highlighted in the results, particularly in the interview with the RA, indicating that farmers face challenges in complying with sanitary and bureaucratic requirements. De Paula and researchers<sup>26</sup> reported successful experiences when farmers received consistent technical support from municipal departments and organizations such as Empresa de Assistência Técnica e Extensão Rural – Emater (Technical Assistance and Rural Extension Company).

For Souza and Beraldo,<sup>27</sup> it is essential to value technical assistance services, which are crucial for the productive arrangement and mobilization of farmers. From this perspective, Mossman and Teo<sup>28</sup> indicated that the lack of adequate assistance can create barriers, such as the minimal involvement of farmers settled in agrarian reform.

Additionally, it is important to address the connection between the executing entity and the farmers in the municipal PAE. The study results highlight difficulties related to communication failures between the social actors involved, such as the lack of prior notice about the publication of the public call.

Silva et al.<sup>29</sup> emphasized the need for proper publicizing of the public call. They suggest it should be carried out through local media, such as radio programs and sound cars traveling around rural communities. This is an effective strategy for disseminating information, especially in areas where internet access may be limited.

There were no reports of prior meetings between the nutritionist and local family farmers to gather data on what they produce and what they are interested in supplying to the municipality for inclusion in menus and public calls. Farmers reported no involvement in drawing up menus for school meals.

When menu planning aligns with food seasonality and actively involves farmers, better production planning occurs, benefiting both producers and municipal management. In this regard, Melão<sup>30</sup> noted that this interaction allows for more varied, nutritious, and culturally appropriate menus, respecting the local agricultural vocation.

Bringing managers and farmers closer also fosters respect for production practices, supply predictability, and fairer participation by family farmers in the bidding process.<sup>31</sup>

Therefore, both the failure to publicize the call for tenders and the preparation of menus without family farmers' participation contribute to public calls for tenders being declared deserted due to the lack of interested farmers.

## Participation in public policies

The results of the research indicate the discontinuation of the PAA program in the municipality, a program managed by the federal government. A closer examination of federal budget allocations reveals a drastic reduction in the funds designated for FNS public policies between 2018 and 2021. According to the literature,<sup>32,33</sup> the reduction in resources intensified due to the fiscal crisis, exacerbated by the progressive decrease in investments by the Ministry of Agrarian Development, whose budget was significantly reduced.

In 2018, the amount allocated to the Acquisition and Distribution of Food from Family Farming for the purpose of promoting FNS was BRL 375,973,500.<sup>34</sup> By 2021, this amount had fallen to BRL 101,677,800,<sup>35</sup> representing a reduction of more than 70% in the funds available for this purpose, which rendered the continuation of the program impossible.

It is important to note that the discontinuation of the PAA program may have contributed to the decrease in settler participation in the Orlândia PAE, as the results suggest that for family farmers, the PAA served as the primary marketing channel. Notably, the PAA, in 2008, received a significant investment of BRL 508,952,372, which was crucial for improving farmers' quality of life, expanding their market participation, and stimulating an increase in food production.<sup>36</sup> Without the support of the PAA, farmers lost an important commercialization channel, potentially weakening their productive capacity and diminishing the incentive to sell their products.

In conclusion, the main limitations of this study are related to sample size and the selection of interviewees. The small number of farmers limited the breadth of the information collected, which may have compromised the generalizability of the results to other contexts. Additionally, the inclusion of agronomists from Coordenadoria de Assistência Técnica Integral (Comprehensive Technical Assistance Coordination) could have provided a technical perspective on the coordination between agricultural sectors and the implementation of local public policies, thereby enriching the data on the operationalization of these policies. However, these professionals were not included in the study because, according to the interviewees, there was no cooperation between this sector and the other participants in the research.

The inclusion of additional managers was also not feasible due to the small number of employees in the municipality. For future research, we recommend expanding the sample to include farmers, agronomists,

and other relevant actors. This approach could stimulate new discussions and provide a deeper understanding of the integration and effectiveness of public policies in agriculture at the municipal level.

## CONCLUSIONS

This study revealed that although the PAA and PNAE programs are fundamental for strengthening family farming and local food supply, they face operational and coordination challenges that compromise their effectiveness in the municipality studied. The discontinuation of the PAA, due to a reduction in public funds, has disrupted the production flow for family farmers, who find themselves without their primary commercialization channel. Conversely, the PNAE, with its more complex operationalization, presents additional implementation difficulties in the municipality studied.

The study demonstrated that the lack of communication between municipal managers and farmers impedes the efficient implementation of the Orlândia PAE. Insufficient dissemination of public calls for proposals and inadequate joint planning of school menus may have contributed to the low participation level among local producers. The lack of specialized technical advice exacerbates this situation, making it difficult for farmers to organize and comply with legal requirements.

Based on this case study, it is concluded that greater coordination among the actors involved, providing technical support to family farmers, and implementing measures to facilitate logistics, communication between parties, and access to public calls could enhance farmers' participation in the PAA and PAE within the municipality.

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### Contributors

Tavares ALC worked on all stages of the study, from study conception, data collection, analysis and interpretation to writing and revising the article; Teixeira JC participated in data collection, analysis and interpretation to writing the article; Galante Junior W and Vassimon HS participated in conception, study supervision, data analysis and interpretation, and final revision of the article.

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