

Article

Case Study of the School Feeding Program in Distrito Federal, Brazil: Building Quality in Short Food Supply Chains

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Abstract: This article seeks to analyze the public procurement program for school feeding in Distrito Federal, Brazil from the perspective of short food supply chains (SFSCs) and quality construction. Semi-structured interviews were applied to key actors involved in the Program. The results of this research show that, mainly through the regulations around Food and Nutritional Security and in the encouragement of local family farmer markets, the State has acted for a quality shift through public purchases and, mainly by means of norms such as laws, decrees, and normative instructions, induced a quality change in the production and consumption processes. This study contributed to an understanding of how Executing Entities such as states are working to acquire local and quality agricultural products, which benefits local farmers and improves the quality of school meals.

Keywords: short food supply chains; quality; institutional markets; school feeding program



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1. Introduction

The journey of food from farm to table can vary greatly between different locations; in some cases, longer distribution supply chains are involved; in others, producers and consumers are closer. The debate around short food supply chains (SFSCs) is increasingly present in academic discussions, forums, and agendas on production and consumption policies on localized and more sustainable food systems [1–4]. These chains reside under a logic of proximity between producers and consumers, either by face-to-face proximity based on trust, or by the information that the product carries, allowing consumers to form associations and feel closer to the producers and the places of production through the symbols that the products carry [1,5].

In this sense, quality in short food supply chains starts is observed in the context of a shift from the conventional and industrialized system of long chains, to alternative, local food systems based on sustainability principles, a phenomenon Goodman [6] called “quality turn”. Thus, the concept of quality is contested, constructed, and represented in different ways by the different actors in the food chain [7–9].

From this perspective of understanding how quality is constructed in short food chains, this article analyzes public purchases from family farmers for the School Feeding Program. The demand for food for public facilities such as schools can promote this quality turn. However, an articulation between the farmers who produce these fresh products and the schools that receive them is required [10]. Empirical studies can help understand, among other elements, the design of the program, the food offered, the participation of farmers or school managers to promote the dialogue between production and consumption.

Thus, this research seeks to investigate how quality is built on short food supply chains fostered by the Brazilian National School Feeding Program (PNAE) in Distrito Federal (DF). The PNAE was chosen as the object of study because it includes characteristics that can boost the development of short food supply chains (SFSCs) for family farmers residing in

Distrito Federal, based on criteria such as location, product quality, culture, food security, and sustainability (Brasil, 2009).

The PNAE was established in 1955, by Decree No. 37,106. It is one of the oldest public policies in the area of Food and Nutritional Security in Brazil [11]. PNAE is a national school feeding program that offers meals for millions of students in Brazil. The financial resources are transferred to the so-called Executing Entities (EEx.), which can be states, municipalities, and federal schools. Since 2009, Law No. 11,947, from 16 June 2009, which provides for the PNAE, determines that at least 30% of the funds transferred to the states, municipalities, and Distrito Federal by the National Education Development Fund (FNDE) to pay for school meals must be used to purchase products from family farms [12].

Despite this provision, the Executing Entities (EEx.) were unable to meet the percentage established in many cases, due to operational and political difficulties. In the case of the Brazilian Federal District (DF), in the beginning of 2019, it was established that all schools in the public school system would receive products from family farming. Contracts were signed with 16 associations and cooperatives of farmers from the area, amounting to R\$18.9 million and involving 950 farmers [13]. The greater use of resources and the expansion of the supply of these products demonstrate that the DF is looking for new ways to achieve the objectives of improving the quality of the food supplied and promoting the insertion of family farmers in the program, following the guidelines laid out by the PNAE.

Therefore, based on the observation of short food supply chains located in the Distrito Federal, which were structured, created, or promoted by the School Feeding Program (PAE) in the DF, the objective of this study is to evaluate the process of building quality in these chains and to identify if the phenomenon of a quality turn has occurred in Brazil along the same as suggested referenced by the current literature. This study is justified by the fact that, even though the Family Farming Acquisition Law is over ten years old [12], the Executing Entities (EEx.) still have difficulties in acquiring food from family farmers and, in the case of the DF, the incorporation of products purchased from family farming in all schools only happened in 2019.

2. Materials and Methods

This article sought to identify, from different actors, how quality is built and perceived in relation to the food supplied to the Program through the short food supply chains of family farming. The results were made possible by the application of semi-structured interviews with the various actors involved in the Distrito Federal's School Feeding Program. To evaluate the interviews, a procedure of content analysis was used, following the protocol proposed by Bardin [13], which consists of the adoption of three steps: (1) pre-analysis; (2) material exploration, categorization or coding; and (3) treatment of results, inferences and interpretation. For better use of the data, step 3 was performed with the help of the IRAMUTEQ software (*Interface for R for Les Multidimension Analyzes de Texts et de Questionnaires*), which will be presented in topic 4.

For this analysis, the first step was the elaboration and validation of the semi-structured interview script. After this process, the main actors involved in the School Feeding Program were identified and invited to participate in the research. A total of 16 individuals accepted the invitation and were interviewed. All interviews were recorded, transcribed, and organized for content analysis. The questions addressed in the semi-structured interviews, in addition to the identification of respondents, covered: Motivations for purchasing food from local farmers and the role of actors; Difficulties, facilitators, and strategies for promoting local purchases; and Legitimation of SFSCs and perception of quality. The questions were elaborated mainly based on the theoretical framework (quality turn), other studies that evaluated government purchases, and the program operationalization regulations (norms and attributions in the context of the Program). It is noteworthy that, although many studies evaluate government purchases for school meals in Brazil concerning operationalization, the study adopted a focus on the quality turn that is still little used in this context.

Figure 1 presents the research methodology.

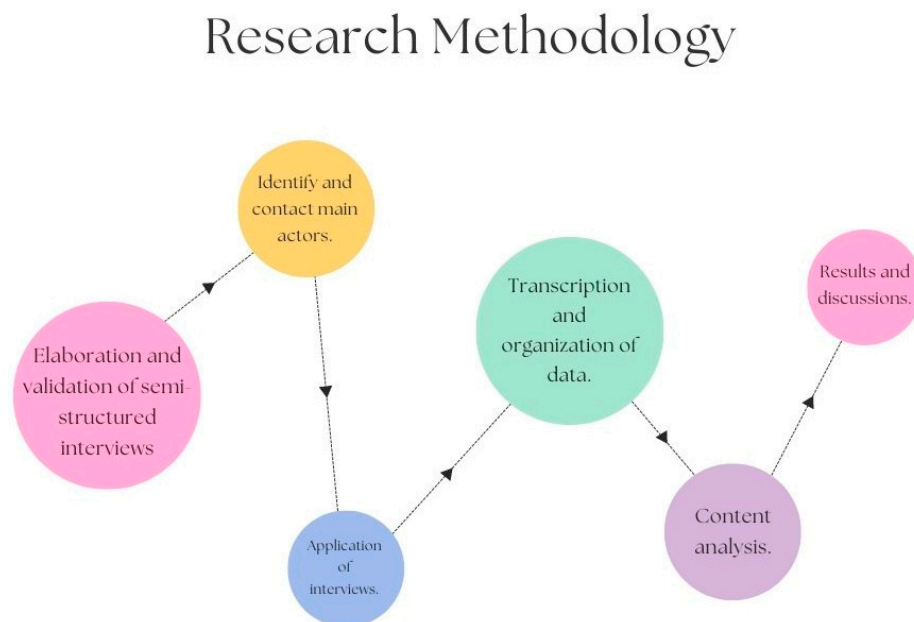


Figure 1. Research methodology flowchart.

This research also employed document analysis, carried out through the FNDE’s Accountability System—SiGPC (a public-access system that has provided data on financial resources used by public entities in Brazil), public tenders (administrative procedures to select specific proposals for the acquisition of foodstuffs from family farming and/or rural family entrepreneurs or their organizations), and documents, government regulations, manuals, and laws on the School Feeding Program.

2.1. The Actors

To understand how quality is assessed and constructed from the perspective of the different actors that make up this study, the interviews were designed to be oriented to them. The defined questions are based on the definition of quality adopted by researchers in short and alternative agri-food chains, where quality is seen as socially constructed.

To facilitate the reading and analysis of the interviews, the actors are classified as:

- Managers: individuals who hold management positions within the Executing Entity (SEEDF) or FNDE;
- School managers: principals, vice-principals, and administrative coordinators of public schools who are responsible for managing the food-related processes in schools;
- Cafeteria cooks: professionals responsible for receiving, handling, and preparing school meals. They are also responsible for serving the students and for organizing and cleaning the school kitchens;
- Nutritionists: health professional responsible for food security and for the preparation of menus under the Program;
- CAE members: members of the current management of the Distrito Federal School Food Council; and
- Farmers: representatives of cooperatives and associations or individual producers who provide food to the Program in Distrito Federal and are considered family farmers.

2.2. Data

For clarity in interpreting the information, 16 semi-structured interviews were conducted with: 1 manager; 6 school managers; 5 cafeteria cooks; 3 farmers (1 member of a cooperative, 1 member of CAE-DF and representative of a cooperative, and 1 president of an association); and 2 nutritionists. All participants were of legal age and signed an

informed consent form. All interviews were recorded, with an average duration of 15 to 30 min. The data collection was carried out between August and December of 2019.

The data analysis phase consists of adopting step 3 of content analysis (data processing and interpretation, which consists of performing statistical operations, synthesis and selection of results, inferences and interpretation). To complete this step, the free software IRAMUTEQ was used.

IRAMUTEQ is developed in the Python language and uses functionalities provided by the statistical software R [14]. IRAMUTEQ allows several types of textual analysis, from simple analyses, such as basic lexicography (calculation of word frequencies) to more complex ones, such as multivariate (descending hierarchical classification and post-factorial analysis) [15].

To examine the answers obtained in the interviews, the similitude analysis was used. Similitude analysis is based on graph theory whose results help to study the relationships between objects in a mathematical model [14,15]. This analysis helps the researcher to identify the structure of the database, distinguishing the common parts and the specifics; in addition, it allows for verifying them according to the existing descriptive variables [15].

2.3. The School Feeding Program in Distrito Federal, Brazil

The Distrito Federal (DF) is located in the Central-West Region and is one of the 27 federative units of Brazil. It is not classified as a state or a municipality, but as an autonomous territory divided into 31 Administrative Regions [16]. However, its operating logic is more similar to that of a state, being led by a governor. According to the Brazilian Institute of Geography and Statistics (IBGE) [17], the DF has a territorial area of 5,760,783 km², with an estimated population of 2,974,703 inhabitants.

According to the Government of the Distrito Federal (GDF) (2019), the School Feeding Program (PAE-DF) reaches a total of 360,360 students and provides approximately 64,192,095 meals, on 200 school days, in the 651 schools of the State Secretary of Education of the Distrito Federal (SEEDF). Since March 2019, it has been established that all public schools in the DF should receive food from family farmers. The link between local agriculture and school feeding programs can be considered as a government strategy to promote economic development [18].

The Program also counts with the participation of more than 600 farmers and 16 cooperatives and associations [19]. Like all Brazilian states and municipalities, when it comes to school meals, the Distrito Federal is subordinated to the FNDE. The DF receives resources from it to be used exclusively in the acquisition of food for students, and it must follow the relevant national legislation.

As in other Brazilian states, the DF has a local School Meals Council (CAE). According to Resolution No. 26 of 17 June 2013, the CAE is responsible for supervising and directly monitoring the PNAE, to ensure that all students in the public school system regularly receive quality meals that meet their nutritional needs. CAE-DF is composed of representatives from the civil society, education workers, parents, and students [20].

The School Feeding Program in the DF follows a centralized management model [20], in which the entire process of acquisition and purchases is made by the DF Department of Education and, subsequently, the food is distributed to public schools. In the case of the DF, it is the nutritionists from the Department of Education who decide the menu and choose the food items to be purchased. The funds to purchase the products come from the FNDE; supplementary funds are supplied by the Distrito Federal Government.

The centralized management model operates as follows: (1) the FNDE transfers the funds that come from the National Treasury, and the Distrito Federal Government supplements and transfers them to the School Feeding Program; (2) An Executing Entity (EEx.), which is the Distrito Federal Government, is responsible for the use and accountability of these funds and the provision of school meals; (3) the SEEDF Executing Unit is responsible for receiving and managing the financial resources transferred by the EEx. [20,21].

3. Results

The SFSC literature argues that SFSCs are rooted in trust constructs and close ties (geographic or symbolic ties that a product carries and that are transmitted to the consumer) [5]. Based on documents such as contracts for the purchase of food products for school meals, we have noticed that SFSCs involving family farmers are considered short in the sense of geographical proximity, as farmers and their organizations as cooperatives and associations are mostly located in the DF area, who deliver to schools close to them.

We considered it pertinent to evaluate, in terms of mileage, what the interviewees meant precisely when they referred to the products of family farmers as “local” or “from the region”. The distance in miles of each organization was measured, with Brasília, Distrito Federal, as the central point of reference. Almost all of them were between 30 km and 50 km from the federal capital (Brasília). In this sense, one could conclude that most of the production is in fact local/regional and that, according to the managers, the deliveries tend to be sectorized, and the distribution is prioritized according to the proximity between the schools that receive these foods and the farmers’ organizations.

Among the three types of chains presented by Marsden et al. [5], the SFSCs identified in this research are in the “spatial proximity” category. Since the products are produced around the Distrito Federal and sold in the area, consumers (GDF/SEEDF) know the origin of these products. Similarly, the individuals who handle the food are also informed about the production site of the foodstuffs received.

The trust in farmers and their products is one of the criteria for an SFSC to be established, considering its logic that resides in the approximation between producers and consumers [22]. Through observations and interviews, we found that the majority of individuals who were at one end of the consumer relationship (principals; cafeteria cooks; etc.) had confidence in the products purchased:

Yes, I trust it. I do not know this issue of pesticides, the quantity . . . , but they are good foods.

(CAFETERIA COOK 4)

Apparently, it does not cause any suspicion, because of the possibility of returning it if you don’t find the expected quality, right?

(SCHOOL MANAGER 4)

We have observed that trust in these chains is constituted in two forms. The first one is the perception of the intrinsic qualities of the food (taste, freshness, appearance, etc.), as can be observed in the following excerpt:

They are of better quality, they are fresher foods because they come from the region, so the transport is faster, they are fresher, healthier foods, with a low amount of pesticides, so they are much better.

(SCHOOL MANAGER 2)

The intrinsic qualities are extremely relevant and considered most by consumers who purchase products in short or alternative chains [23]. One of the strategies for promoting SFSCs is to enhance product-based quality, as consumers are more interested in the freshness and flavor of food [24].

The second form is the quality that is ensured by the norms, i.e., the products supplied by the farmers must meet the current legislation on hygienic-sanitary conditions and, before being purchased, they must be approved by SEEDF and CAE-DF. This is especially important for non-industrialized agricultural products such as fruits and vegetables because, unlike industrialized and packaged products that have stamps showing sanitary inspections and their brand, fresh products can have different quality standards. Therefore, confidence is deposited on the laws and on the approval of managing and inspecting actors in the School Feeding Program. In addition, this confidence is strengthened by the fact that the Program has a mechanism that allows for the return of a product that does not meet quality standards.

It has happened, for example, that some type of food arrived that was not very good and we had to return it, this is an easy procedure to do. We contact the SEEDF, process the return, they collect it and exchange it. It's not stressful at all.

(SCHOOL MANAGER 1)

The information about the nature of the product and the production processes are essential for consumers to build bonds of trust with farmers, and thus strengthen the producer–consumer relationship [1]. This, in turn, constitutes one of the main objectives of short and alternative chains: to rescue the confidence of consumers on producers. However, when the process is flawed, the quality of the products is questioned.

The only thing I think is that, because of the inferior quality, they often are not products from family farms. I suspect that they come from a big fair, from a larger producer, or from someone who buys and transfers them as a family-farm product, I don't know how far SEEDF's control of this reaches.

(SCHOOL MANAGER 6)

As noted in the excerpt from one of the interviews, there was mistrust on the part of one of the six schools visited regarding the nature of the products. However, after investigations and interviews with other actors, we found that the school received organic food. In other words, there was a failure by the sector responsible for purchases to inform the school about the type of food they were going to receive, causing the integrity of the items received to be questioned for not being a product as standardized as those purchased in large markets. As a nutritionist reports: "Sometimes schools complain a little because organic food has a different appearance, right?"

The SFSC literature also refers to the issue of the number of intermediaries in the chain, which should preferably not exist or be minimal [25]. We have noted that the short food supply chains identified in this research have no intermediaries, all deliveries are made directly to schools by family farmers, preferably to schools that are close to cooperatives and associations. All respondents confirmed this practice.

And these cooperatives and associations are spread throughout the DF and the surrounding area, so for geographic reasons, it is also easier for the farmer to plant, harvest, and deliver to the school. If the farmer is from Planaltina-DF he delivers it to the Planaltina-DF school, so it's very fast, you don't lose produce. With the outsourced company we still have a contract with to supply other items is different, because you pay them and they buy from another producer and then they deliver, there is more intermediation, the produce no longer has the best quality.

(MANAGER 1)

The food produced and delivered by local farmers is perceived by users of the Program as a criterion of quality because, due to the short distances traveled, the products arrive fresher in the schools, unlike those distributed by long supply chains. Due to delays in distribution and on account of more distant routes, reduced quality and food loss might occur [4].

Another point mentioned in the literature is the social character that SFSCs must have in allowing farmers to earn higher and more stable incomes, thus strengthening the local economy [26,27]. The observations and interviews allow the inference that the public purchasing policy from family farms was one of the ways through which farmers are integrated into the market.

In general, that's what it is, better produce condition, better produce quality, the strengthening of policies, and like I said, families can participate more, have a guaranteed source of income, not necessarily having to leave the countryside and go to the city, it also helps to fight the rural exodus, right, so by making this happen we can act on several fronts.

(MANAGER 1)

We have concluded that some farmers depend exclusively on this market due to necessity or convenience to maintain their activities. However, for other farmers, the associated income is merely supplementary, as one interviewed farmer comments: “For me, it does not pay much, because the produce I sell are organic, and the Program pays the same price as the conventional one”. According to the FNDE [21], at least 30% of the funds transferred by the FNDE must be destined to the acquisition of food from family farming, giving priority to the acquisition of organic food, based on agroecology and socio-biodiversity. The guidelines also allow up to 30% more for organic food, when compared to the prices of conventional items.

As in this study, the research carried out by Franzoni and Silva [28] on SFSCs of the PNAE in the city of Porto Alegre, Brazil found that some farmers depended on the institutional markets. As a way to overcome this dependency, the authors suggested that producers, through cooperatives and associations, begin to explore other markets, so that, by diversifying, they are protected from eventual changes in the Program’s rules. In this sense, Izumi et al. [29] mention the example of farmers who participate in the United States’ Farm to School program, where the institutional market is seen by producers as a mechanism to support market diversification and as an aid to stable income, instead of the farmers’ only market option.

The democratization of food (healthy, differentiated, nutritious food) is widely discussed in the literature on SFSC [9,30]. We have noticed that, by introducing produce from family farms, the School Feeding Program in the DF promotes the access to this type of food for the beneficiaries of the Program, especially those who cannot afford the products. From the moment when the GDF, in 2019, started to distribute these food products to all schools, the administration starts to contribute to food democratization in the Distrito Federal; before then, only half of the schools received products from family farming. This result is in line with the argument of [18,31] that public procurement for schools can be viewed as drivers of food and nutrition security.

Therefore, the chains observed in this research can be considered short in the sense of geographic proximity (local), the number of intermediaries, and the fact that the GDF/SEEDF and main actors has confidence in the acquired produce, as well as the greater part of those who represent SEEDF and are at the forefront of implementing the school feeding policy. After concluding that the chains could be considered short, we tried to analyze how quality is built.

We found that these expressions were inserted into phrases that alluded to family farming produce as distinguished products of superior quality, compared to processed food. The former is considered healthier, more natural and fresh, according to the interviewees.

The products are healthier. Fruits and vegetables are much healthier than processed foods because they have no pesticides.

(CAFETERIA COOK 5)

When Goodman [6] presented the concept of a quality shift, the author argued that this shift refers to the search for consumer and production practices that migrate to a quality that is anchored in concepts of sustainability and naturalness of the products, distancing themselves from those that refer to processing and mass distribution. This shift also fosters the support of alternative networks and chains.

Figure 2 depicts the similitude analysis. From it, it is possible to visualize where the quality criteria perceived by the interviewees are rooted.

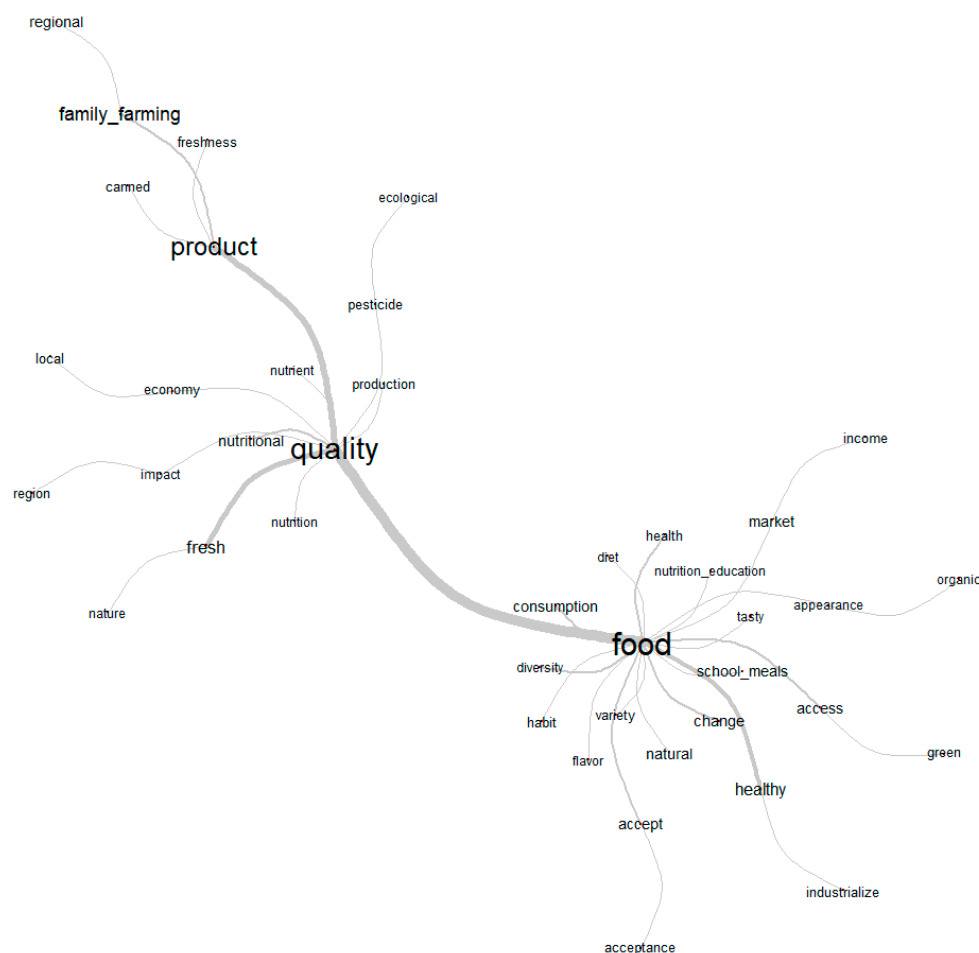


Figure 2. Similitude analysis of words related to quality.

The similitude analysis shows that the expressions “quality”, “product”, and “food” appear as possible organizing axes of representations on the perception of quality. The (central) quality element mainly evokes expressions that represent perceptions of the product, e.g., the words “fresh”, “health”, “nutrition”, and “tasty”. Starting with the “food” branch, quality is perceived by the respondents as healthy food, different from processed food, such as organic. In the “product” element, quality represents a fresher, natural product, different from canned or frozen products.

This similarity analysis also demonstrates from the respondents’ verbalizations that public policies for food procurement have great potential to foster healthy diets based on more sustainable food systems in public institutions [10]. Furthermore, these policies, such as the School Feeding Program, exhibit the key feature of determining how food is purchased, as well as what types of food are purchased [10].

It appears that the quality construction processes in the analyzed SFSCs have elements that are part of the analytical category of the quality shift proposed by Goodman [6]—facilitating a shift from an industrial logic to one of alternative agrifood chains. Food markets are becoming more differentiated based on a variety of quality criteria that are socially constructed, resulting in the emergence of new quality markets that differ from commodity markets [1]. The following testimonies suggest this “quality turn” from the industrial quality to more natural, fresh, and nutritious products.

Our menus in a way depend on us having family farming so that we have this improvement in results, fewer cookies, less canned items, less concentrate, more fruits, more vegetables, more fresh meat, more animal protein.

(MANAGER 1)

We have noticed that the perception of quality is built “upstream”—a normative quality (State) already established that offers mechanisms for the GDF, through SEEDF to disseminate criteria and standards, which are spread then by the Program managers to the actors who are at the execution end. This observation in the context of the Program corroborates the study by Sonnino et al. [32], who argue that the school feeding policy in Brazil is developed in a favorable environment of governance networks and coordination links at various levels, in which food-related symbols and values are collectively defined at a central level (Country to Federal Government), and are interpreted and executed in different ways according to the location.

In the farmers’ perception, the products have a higher quality than those marketed by conventional chains, their products are produced ecologically and are consumed by the farmer’s family, so the producers seek to defend and introduce this concept of quality. According to the reports, the three farmers interviewed supplied organic or ecologically produce to the Program. They also emphasize the freshness of the products because, since they are delivered every Monday, the products are processed on the weekends. Once they are produced locally or regionally, they do not need to travel far (food miles) to reach consumers, in this case, public schools.

The way we produce is ecological cultivation, and I can guarantee, without fear, that at least eighty percent of what is supplied does not have chemical pesticides, but a mineral pesticide. So eighty percent of the products are produced ecologically, the majority fertilized with chicken litter.

(FARMER 2)

Quality is essential, especially at the Cooperative. How do we work it out? Everything is processed on Sundays, right. So the products that last longer, say sweet potato, pumpkin, they can even be harvested on Saturday afternoon. Now, the most perishable products are cabbage, chives, parsley, this is all harvested on Sunday afternoons and they arrive early in the evening at the Cooperative. And early in the evening, they are sorted, separated by school, everything is weighed and placed in the trucks. We finish around midnight or two in the morning, so the trucks are loaded by five o’clock in the morning, ready to make the deliveries. So the freshness is much greater.

(FARMER 1)

Several quality criteria involving SFSCs are mentioned in the literature. Table 1 below shows the criteria observed in the interviews, with the number of times that they were repeated by the interviewees.

Table 1. Quality criteria (literature) identified in the interviews.

Criteria	Number of Repetitions	Theoretical Framework
Local	9	[1,4,5,22,25,27,33,34]
Artisanal	0	[1,25,35]
Seasonal	1	[9,30,36,37]
Organic	3	[2,9,31,36–38]
Ecological	2	[1,6,9,26,33,34]
Natural (unprocessed)	15	[1,3,6,10,33,37,38]
Nutritious/healthy	14	[26,30,32,33,36,38,39]
Fresh	23	[26,33,36,37,39]
Certificate	0	[1,37,40]
Trustworthy	5	[1,5,24,26,33,35,41]
Fairtrade	3	[33,40,41]

It appears from Table 1 that, out of the 12 quality criteria most cited in the SFSC literature, nine were mentioned by the interviewees, with an emphasis on “natural”, “nutritious/healthy” and “fresh”. This leads to the conclusion that the aspects that permeate the concept of the quality turn are visible in the SFSCs identified in this study, especially when it comes to the consumption of foods that contrast with the view of processed and industrialized foods and the promotion of short chains in the Distrito Federal. The difference is that, in Goodman’s view [6], this turn is carried out through a consumer movement, and, in this study, the turn is promoted and built by the State, corroborating the Sonnino’s interpretation [9], that the State is a powerful entity in the agri-food sector and has the potential to create alternative chains and quality criteria, as well as disseminate them in society’s culture.

With respect to the quality criteria disseminated by the State through legislation, one could mention the Resolution CD/FNDE n° 26, from 17 June 2013 [42]. Table 2 shows some provisions of said resolution that directly or indirectly build an ideal of quality when it comes to school feeding.

Table 2. References on the quality of Resolution/CD/FNDE n° 26, of 17 June 2013.

Article	Item	Rule
2	V	Support for sustainable development, with incentives for the acquisition of diversified foodstuffs, produced locally and preferably by family farms and rural family entrepreneurs, giving priority to traditional indigenous communities and quilombo descendants;
13	-	For the purposes of the PNAE, Food and Nutritional Education will be considered the set of training actions, which are of continuous and permanent practice, transdisciplinary, intersectoral, and multi-professional, which aims to encourage the voluntary adoption of healthy food practices and choices that contribute to learning, the health status of schoolchildren, and the individual’s quality of life.
14	-	The school meal menus should be prepared by the nutritionist, using basic foodstuffs, to respect the nutritional references, the eating habits and food culture of the community, and be based on sustainability, seasonality, and agricultural diversification in the region, and on healthy and adequate food.
14	§9°	The menus must offer, at least, three servings of fruits and vegetables per week (200 g/student/week) in the meals offered.
16	Single paragraph	The supply of sweets and/or sweet preparations is limited to two servings per week, equivalent to 110 kcal/serving.
22	-	The purchase of beverages with low nutritional value, such as soft drinks and artificial soft drinks, drinks or concentrates based on guarana or blackcurrant syrup, ready-to-drink teas, and other similar drinks, is prohibited.
23	-	The purchase of canned food, sausages, sweets, compound foods (two or more foods packaged separately for joint consumption), semi-ready or ready-to-eat preparations, or concentrated foods (powdered or dehydrated for reconstitution) is restricted.
33	-	The food products to be purchased for the PNAE students must comply with the provisions of the food legislation, established by the National Health Surveillance Agency (ANVISA) of the Ministry of Health (MS) and the Ministry of Agriculture, Stockbreeding and Supplies (MAPA).

The dimensions of quality in SFSCs can be divided into three categories: (1) regional or artisanal; (2) ecological or natural; (3) hybrids that combine both dimensions [1]. In this study, we have observed that the SFSC quality dimension of the Program can be categorized in the perspective of ecological or natural, considering that the attributes most expressed by the interviewees were “natural (not processed)”, “nutritious”, and “fresh”. The observed criteria follow the national trend of acquisitions of fruits, vegetables, and greens, as Figure 3 shows, on the acquisitions of family farming products (blue) for school meals in Brazil in 2017, according to data from the FNDE [43].

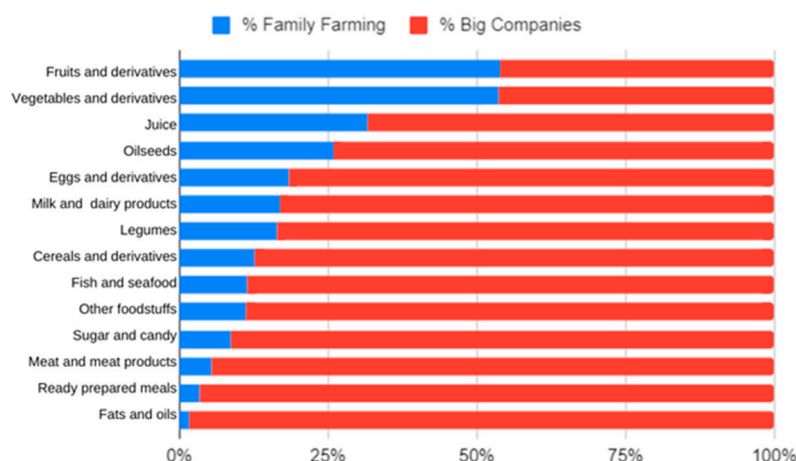


Figure 3. Participation of products from family farms in purchases for school feeding in Brazil (2017).

The figure above shows that, at the national level, the produce classified as vegetables and subproducts as well as fruits and subproducts are the most purchased family-farm items by EExs. It should be noted that the purchase of meat and agro-industrialized products such as sweets and ready-made preparations is not expressive. In other words, the artisanal dimension was not widespread in public purchases for school meals in the Distrito Federal or in the national territory. We list below some conditions that explain why this construct has not been disseminated:

1. Prioritizing the purchase of fruits and vegetables: the PNAE policy and the legislation itself limit the purchase of products rich in sugar and sodium, and prioritize the purchase of fruits and vegetables, considering the nutritional character of these products. Thus, products such as jams, dulce de leche, and other products rich in sugar face serious obstacles, hampered by the food policy itself, focused on healthy nutrition.
2. Legislation as an obstacle: many farmers find it difficult to adapt to health and sanitary legislation and product certification, so many of them operate informally, which ultimately makes it unfeasible for the institutional market to buy from them [44].
3. Agricultural vocation: According to CODEPLAN [16], rural, family-based establishments in the DF are focused on the production of large crops, fruit, and horticulture.

Some local produce such as beans and processed products such as fruit juices could be marketed for school meals in the Distrito Federal. However, health standards and the need to adapt the production establishments can hinder these purchases.

4. Discussion

The concept of short food supply chains considers aspects such as embeddedness, locality, traditional know-how, culture, and productive practices as alternatives to conventional agriculture. Thus, artisanal/traditional and family production, which used to be seen as backwards, is now seen as a quality attribute, in which products are marketed in socially built markets based on interactions and exchanges that occur in specific locations, in a system of relationships that connect producers and consumers, based on trust, identity, and a common history [35].

Short food supply chains are involved in a logic of proximity and trust constructs [3]. Marsden et al. [5] state that the main characteristic of an SFSC is its ability to engender some form of connection between food producers and consumers. The authors propose that:

With an SFSC it is not the number of times a product is handled or the distance over which it is ultimately transported which is necessarily critical, but the fact that the product reaches the consumer embedded with information.

(Marsden et al., 2000, p. 425)

It is this characteristic that makes it possible for the consumer to establish connections of trust and associations with the place of production, the values of the producers involved, and the production methods employed [5]. This type of chain is an opportunity for family farmers to be engaged to the market, supplying products manufactured in a traditional/artisanal way, where the methods used in the production and the farmers' know-how are valued, providing greater added value to the products [3,26]. Thus, as small producers have more difficulties in competing on a scale with large producers, they can seek differentiation or de-commoditization. When exploring the dimensions' SFSCs, Marsden et al. [5] identified three main types of SFSCs:

1. Face-to-face: In this type of chain, the consumer purchases a product directly from the producer/processor in a face-to-face dynamic. Authenticity and trust are measured by personal interaction.
2. Spatial proximity: Products are produced and marketed in the specific (local) region of production, and consumers are informed about the "local" nature of the product at the point of sale.
3. Spatially extended: In this type of chain, value-laden, meaningful information about the production and who produced the food is translated to consumers who are outside the region of production, and who may not have any personal experience with that region.

SFSCs enable a closer producer–consumer relationship, based on trust constructs that may involve different conventions and quality constructions [5]. These conventions and constructs evoke locality, specialty, and nature [2]. A common characteristic of these chains is the emphasis on the type of relationship between producer and consumer, and the role this relationship plays in the construction of value and meaning [3,5,40].

In the context of SFSCs, there are two main categories of quality definitions. The first category refers to the characteristics that mainly emphasize the link between attributes of the product and its place of production or producer; in other words, the specific characteristics of the place of production (natural conditions, cultural and gastronomic traditions, etc.) or the production process (traditional, etc.) [1].

The second category relates to the ecological characteristics of production, covering products that, in response to public's environmental concerns, are distinguished by environmentally sound production methods [1]. Quality definitions and conventions can also be hybrid: products that are associated with local attributes (such as regional brands) and that also emphasize aspects related to environmental protection and other ecological factors.

The quality conventions around SFSC involve more than merely the language of production regulations. Above all, they refer to the perceptions and discourses of the actors involved and are influenced by their personal knowledge, interests, and cultural background [1]. The quality construction process also extends to the power relationships between the actors, who compete with each other to control the ecological, ethical, or historical relationship between a food product and a specific production context [9].

In the context of the quality of short chains in the institutional market, or public food purchases, further research is necessary to take into account the emergence of the public sector as a new actor in the agri-food scene, with the power to integrate different quality conventions and reshape the economic and spatial conventions and environmental and socio-cultural relations between producers and consumers [9]. As Morley [45] reports, public procurement is a way of promoting more sustainable forms of agriculture. It is not just an exchange of products, but it involves an exchange of ideas, values, and understanding.

Another point of extreme importance, which is often mentioned but rarely addressed, is the issue of food democratization in SFSCs: structures of short food chains provide locally produced, quality food in a fair and equal way [3,33]. Socially just food provision has been strongly diffused in the imagination of alternative agrifood systems. However, it has involved isolated initiatives at microsegments, except for existing efforts in the public procurement sector [2,30].

The results found in this research provide a better understanding of how quality is built into short food supply chains and how the State has acted as a facilitator of new quality standards, based on legislation focused on food and nutrition security policy and on strengthening policies aimed at family farming. In addition, it was possible to verify the importance of the School Feeding Program as a food policy in the sense of forming perception and healthy eating habits among those who benefit from it, as well as among the professionals who deal with food.

The School Feeding Program in the Distrito Federal also addresses the issue of food democratization, as it starts to provide products with different qualities for children and adolescents who, because they belong to the low-income classes, do not have access to this type of food. School feeding programs in Latin America are part of a strategy to eradicate hunger, but it also promotes benefits such as the integration of family farming, healthy and quality food supplies, and more sustainable production and consumption practices [46].

Another implication of this policy is the strengthening of family farming, based on the promotion of the local economy. When the Program starts to acquire products from local farmers, it contributes to the insertion of these farmers in the market, as well as to the increase farmers' income. Bisht, Rana, and Ahlawat [47], analyzing the future of family farming in India, report that public procurement for school feeding can encourage farmers to stay in the countryside and not migrate to the cities, but it is important to ensure that farmers receive a fair price. Farmers may also be somewhat skeptical because they find it difficult to achieve specialization, as shown in the study by Simón-Rojo et al. [48] on the public procurement of agroecological products in Madrid, Spain.

Lastly, this research can serve as a model or parameter for future investigation in other Brazilian states, considering that the Brazilian National School Feeding Program is decentralized and each state and municipality can conduct the Program in different ways. It can also serve as a parameter for other countries that, through the Food and Agriculture Organization of the United Nations (FAO), have implemented the Brazilian model of school feeding programs.

5. Conclusions

Through interviews, observations, and access to documents related to School Feeding Program in Distrito Federal, Brazil, it was possible to interpret how quality is perceived by the actors involved in the Program and to identify short food supply chains. First, we found that the chains were considered short in the sense of spatial proximity and that the distribution of food was done by farmers; in other words, the only intermediary is the Distrito Federal Government, who purchased the products that are served free of charge to the students. We have also concluded that most of the actors involved in the process of receiving and preparing food had confidence in the products of family farmers and emphasized their characteristic of being fresh because they are local products.

The actors involved in the PAE-DF consider "food of quality" items that are perceived as fresh, natural, unprocessed and ecological, distancing themselves from the dimension that refers to industrialized products. Thus, we understand that it is possible to visualize parts of the quality turn concept to be applied in the context of this study, but with the difference that the driver of the movement is the State and not consumer groups. In this sense, the State becomes the main actor in the construction of quality, based on the stipulation of quality standards and constructs.

There were no references to artisanal nature products or personal connections with farmers. We have also observed that, in the Program, quality is built from top to bottom; in other words, the GDF interprets what the PNAE defines as quality in the legislation, then the GDF disseminates it to the other actors involved in the Program. The trend identified here is also observed in the national context. In the case of some artisanal products, the legislation itself limits them by favoring fresh products among other attributes.

It is worth noting that one of the greatest theoretical contributions that this work has provided, from the perspective of quality construction, is that in Brazil there is not a quality

turn movement according to the parameters that the global-north-focused literature has suggested. In the Brazilian case, what we have identified is a *quality induction* movement, in which the State, through various mechanisms, starts to induce and mold qualitative criteria and standards in the relations between production and consumption, at the same time as it seeks to bring products closer to institutional consumers.

Among the challenges involved in conducting the research, we can mention the difficulty in interviewing the actors involved with the PAE-DF. Since the interviews were face-to-face, the researchers had to limit themselves and adapt to the interviewees' schedules and availability. It was also necessary for an authorization from SEEDF to conduct the interviews in schools. In addition, for the study used—more than semi-structured interviews—a larger number of participants could have allowed for the use of more statistical tools, such as comparisons between schools located in different locations.

This study shows that quality in the context of the Federal District is mainly related to fresh, local, and family-farmed products. This perception of the actors is due to the fact that federal regulations concerning school feeding encourage these products and restrict processed products. However, the quality turn in other contexts can differ; in other quality studies, artisanal and processed products can be considered of higher quality by certain authors. Thus, quality is a term that is socially constructed and depends on the perception of the actors, the culture, and the norms, among others.

We recommend that new studies on this approach be used both for public procurement and for school feeding (as in Brazil), where a set of norms already define which products are recommended, restricted, and prohibited, as well as studies by independent consumers to verify what they understand by quality. In other words, one managerial implication of adopting public policies such as school feeding is that its implementation depends on the characteristics of local production, the interest of managers in fostering local agriculture and in changing consumption habits, on the executing teams realizing the importance of inserting quality products, and on the inspection by CAE, among others. Therefore, it constitutes a broad field of study where such diversity contributes to our understanding of what quality is and how it is built.

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