

Strengths and weaknesses in the supply of school food resulting from the procurement of family farm produce in a municipality in Brazil

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Abstract *The objective of this study was to assess compliance with school food programme recommendations for the procurement of family farm produce. This study consists of an exploratory descriptive study utilising a qualitative approach based on semistructured interviews with key informants in a municipality in the State of Santa Catarina in Brazil. Study participants were managers and staff of the school food programme and department of agriculture, and representatives of a farmers' organisation. The produce delivery and demand fulfilment stages of the procurement process were carried out in accordance with the recommendations. However, nonconformities occurred in the elaboration of the public call for proposals, elaboration of the sales proposal, and fulfilment of produce quality standards. It was observed that having a diverse range of suppliers and the exchange of produce by the cooperative with neighbouring municipalities helped to maintain a regular supply of produce. The elaboration of menus contributed to planning agricultural production. However, agricultural production was not mapped before elaborating the menus in this case study and an agricultural reform settlement was left out of the programme. A number of weaknesses in the programme were identified which need to be overcome in order to promote local family farming and improve the quality of school food in the municipality.*

Key words *Public policies, School feeding, Food security*

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Introduction

The National School Food Programme (PNAE, acronym in Portuguese) is one of Brazil's longest standing food and nutrition policies. Its universal character and objectives¹ also make it one of the country's most important policies in this area. The PNAE aims to contribute to the growth and biopsychosocial development of all state school pupils, thereby promoting improved learning and academic performance, and to foster healthy eating habits².

Idealised in the 1940s, the programme only emerged in the 1950s under the responsibility of the federal government³. Ever since, the PNAE has gone through a number of changes, including nomenclature modifications and decentralisation of the management of the programme. The amount of federal government funding transferred to implementing agencies for the operationalisation of the programme has also increased and, more recently, the purchase of family farm products was made obligatory^{4,5}. The changes made to the programme are in line with the precepts of Food and Nutrition Security and the Human Right to Adequate Food.

The initial phase of the programme depended mainly on food donations from the United Nations Children's Fund (UNICEF) and the United States Department of Agriculture³. Its history is therefore marked by the use of formulated foods, initially from donations, and later, since the 1970s, based on food stuffs produced in the country. This, and the programme's centralised management approach⁶, meant that the PNAE largely benefited the processed food industry³.

In the 1990s, regulations established by the 1988 constitution began to come into effect, including political and fiscal decentralisation which delegated responsibility for implementing a large part of public policies to municipal governments⁷.

The decentralisation of financial resources allocated to the PNAE began in 1994 and the responsibility for the provision of school food in non-federal schools was transferred to municipal and state governments through individual formal agreements. This process was consolidated in 1998 when the transfer of funding became automatic without the need for individual agreements⁴.

In 2009, new legislation was approved (Law 11.947) which brought a number of important

changes to the implementation of the PNAE. This law established that at least 30% of the funding allocated for the PNAE by the National Fund for the Development of Education (FNDE, acronym in Portuguese), the federal government body responsible for the management of the programme, must be used to purchase food produced by family farmers⁵.

These changes had an important impact on the country's development. According to Triches and Schneider⁸, the current PNAE framework is associated with "a development model which not only promotes economic growth, but also social justice, environmental conservation and public health".

In this sense, a model which encouraged the production and consumption of processed foods was replaced with another model which sought to promote the production and consumption of family farm produce. This strategy is founded on the important role that family farming plays in achieving food and nutrition security in Brazil. According to the results of the national agricultural census⁹, 84.4% of farming units are family farms which account for a significant proportion of the production of highly important crops within the context of food consumption in Brazil.

A study carried out in the State of Rio Grande do Sul showed that, apart from generating new market opportunities for family farmers and fostering the adoption of production techniques which are less harmful to the environment⁸, the acquisition of locally-grown produce had a positive influence on healthy and adequate food consumption in schools. Similar results were also observed with the introduction of organic produce into school meals¹⁰. However, studies show that the number of municipalities that do not purchase locally-grown produce remains high^{11,12} and that there is a need to broaden the range of food stuffs purchased for school food¹³.

Given the apparently large number of municipalities which do not comply with the requirement to purchase food stuffs produced by local family farmers^{11,12}, this study seeks to understand the **institutional procurement process** for family farm products under the PNAE with emphasis on the opportunities and difficulties. It does this by assessing compliance with government recommendations for the procurement of family farm produce used in school food in a municipality in the State of Santa Catarina.

Methodology

This study is part of a wider study entitled “An Analysis of the Food Procurement Programme in School Food in a Municipality in the State of Santa Catarina”, that analysed the nutritional, regulatory, sensory and sustainability dimensions of the quality of school food produced using fruits and vegetables received through Food Procurement Programme. During data collection, the importance of the procurement of food produced by family farmers for school meals using resources from the National Fund for the Development of Education became strikingly evident, showing that it was essential to explore this aspect in greater detail.

This study consists of an exploratory descriptive study utilising a qualitative approach. Semistructured interviews were conducted with key informants directly involved in the planning and management of the School Food Programme and in family farming in the municipality. The key informants were identified and contacted with the help of the municipality’s nutritionist and divided into the following three categories: (1) managers and staff of the School Food Programme; (2) managers and staff of the department of agriculture of the municipality; and (3) representatives of a farmers’ organisation.

Sixteen semistructured interviews were conducted in September 2010 (Table 1). Participation was strictly voluntary and the identities of the interviewees remained anonymous. The

study was approved by the Human Research Ethics Committee at the Federal University of the State of Santa Catarina (UFSC, acronym in Portuguese).

Different questionnaires were used for each category of key informants according to their particular involvement in the process in order to obtain specific information about each stage of the procurement process. The topics covered by the interviews are presented in Chart 1.

The interviews with managers and staff of the School Food Programme and department of agriculture were conducted in the interviewee’s work place, while farmers were interviewed in the schools after delivery of the produce. The participants were provided with information about the study’s objectives before the interview started and were assured that their identity would remain anonymous. Interviews lasted for between 15 minutes and two hours and twenty minutes, depending on the informant’s involvement in the programme. All interviews were recorded with the consent of the participants and later transcribed.

The interviews were analysed to identify the most relevant arguments (pearls) which were compared and discussed by the researchers. To assess compliance with government recommendations for local procurement, the interviewees’ responses were divided into categories which reflected stages of the procurement process based on government recommendations for implementing the programme^{2,14}: (1) Planning and

Table 1. Interviewees by category.

Category	Key informants	N
Managers and staff of the School Food Programme	Member of the School Food Council	1
	Programme nutritionists	2
	Education secretary	1
	Cooks	3
	Total	7
Managers and staff of the department of agriculture	Rural extension worker	1
	Agricultural engineer	1
	Agriculture secretary	1
	Agricultural technicians	2
	Total	5
Representatives of the farmers’ organisation	Representative of the farmers’ cooperative	1
	Family farmers	3
	Total	4
Total number of key informants		16

Chart 1. Topics covered by the semistructured interviews by category of interviewee.

Key informant category	Topics covered by the semistructured interview
Managers and staff of the School Food Programme	Characterisation of school food Menu planning Selection of suppliers (purchase planning) Purchase system Receipt of products Activities developed by the School Food Council
Managers and staff of the department of agriculture of the municipality	Characterisation of agriculture in the municipality Production planning (department of agriculture and cooperative) Selection of suppliers (purchase/sale planning) Purchase system Delivery of products
Representatives of the farmers' organisation	Characterisation participating farmers from the cooperative Production planning (members cooperative) Selection of suppliers (sale planning) Sale system Delivery of products

elaboration of the public call for proposals; (2) Planning and elaboration of the sales proposal; (3) Produce delivery; (4) Demand fulfilment; and (5) Fulfilment of produce quality standards.

Results

A summary of compliance with recommendations by category (stage) is presented in Chart 2.

Elaboration of the public call for proposals

The initiative to begin the procurement process to purchase produce directly from family farmers was taken by the nutritionists responsible for the School Food Programme. After elaborating the menus, the nutritionists carried out meetings with a representative from a cooperative that had been supplying produce through the Food Procurement Programme (PAA, acronym in Portuguese) since 2007. Subsequently, the products that would be supplied by the family farmers were defined. The involvement of the department of agriculture in this stage of the process was not registered.

According to the interviewees involved in the management of the School Food Programme,

produce demands were explained to the farmers' organisation to determine which products should be purchased:

[...] we held a meeting with him and asked him [the representative of the farmers' organisation], we listed the food stuffs that we needed and he listed the produce they were able to deliver (representative of the School Food Programme).

According to the farmers' representative, the type of produce and quantity produced by each farmer were decided based on the demands of each school:

We got a list of demands from the secretaries, what they consumed, and took the list to the farmers and spoke to the farmer (representative of the farmers' organisation).

It was observed that the involvement of the agriculture department in the programme consisted of providing training courses and technical assistance to farmers, as shown by the statement of the one of the participants linked to the department of agriculture:

Just with respect to monitoring. I have a list here of produce to be supplied by family farmers to the municipal state schools under the School Food Programme [...]. What happens is that it's not that we participated directly in their production, you know, but [...] various farmers that are

Chart 2. Summary of compliance with recommendations by category (stage).

Stage	Procurement recommendations	Results from case study
Elaboration of public call for proposals	Map agricultural production prior to elaborating menus; supply sufficient information for suppliers to present sales proposal ¹² .	partial compliance
Elaboration of the sales proposal	Project elaborated by a formal or informal group ¹² . Prioritise purchase from farmers in the municipality ¹³ . Use networks of family farm suppliers already involved with sale of food under the PAA ¹² . Prioritise members of agricultural reform settlement as suppliers ^{12,13} . Prioritise organic products ¹³ .	in compliance in compliance in compliance noncompliance partial noncompliance
Produce delivery	Produce delivery should begin in accordance with the schedule included in the contract ¹² .	in compliance
Demand fulfilment	Dispense with the purchase of foods from family farmers when a regular and constant supply of food products is not viable ¹³ .	in compliance
Fulfilment of produce quality standards	Fulfil quality control requirements for foods established by current regulations ¹³ .	partial compliance

producing for school meals in municipal schools, he did some agroecology courses etc.. (representative of the managers and staff of the department of agriculture).

Based on the information gathered from the meetings, the nutritionists responsible for the programme made the purchase lists for the call for proposals, which contained information about produce, quantities and place of delivery.

Elaboration of the sales proposal

The sales proposal was elaborated by the family farmers' cooperative with the participation of 37 farmers from the municipality who already had experience with supplying produce for school meals under the PAA. We identified the existence of an agricultural reform settlement that was not involved in the programme and the purchase of some organic products in the municipality.

A representative of the School Food Programme suggested that previous experience with the PAA was a major advantage for the purchase of local produce:

The way we see it is that the PAA, I think, served as a basis to ensure the success of the 30% [referring to the 30% of the FNDE funds that must be spent on family farming]. Because they started the PAA (representative of the school food programme).

According to a representative of the managers and staff of the department of agriculture, the municipality has one agricultural reform settlement, which was not identified as a potential participant in the programme. It should be noted that the existence of the settlement was not mentioned by the other interviewees.

[...] we have one settlement here in the municipality, [...] about 35 km, dirt road [...] (representative of the managers and staff of the department of agriculture).

The type of produce purchased included fruit and vegetables, legumes and processed foods. Certified organic products stood out among the processed foods:

[...] with respect to grape juice, yes. It's certified. The two types of grape juice and ready-made tomato sauce we bought as well. [...] (representative of the School Food Programme).

According to the representatives of all three categories, the programme supplied other food stuffs produced without the use of agrochemicals. However, these products were not certified due to the difficulties involved in complying with the requirements of the certification process:

The black mulberry is produced organically. But it isn't certified yet (representative of the managers and staff of the department of agriculture).

Produce delivery

The next phase after selecting the proposal and signing the contract is delivery which is made based on pre-established criteria and a schedule. Staff are instructed to check the quantity and quality of the produce and advise the education department in the case of any irregularity.

According to a representative of managers and staff of the School Food Programme the quantity of produce supplied to each school was periodically adjusted:

The call for proposals states a total quantity [...] let's say 254 kg of beetroot per week. An authorisation is given for 254 kg, but for the delivery we send a weekly schedule together (representative of managers and staff of the school food programme).

Also according to a representative of managers and staff of the School Food Programme, the produce checking process is hampered due to structural problems:

We receive [the produce] but we can't weigh it to check the quantity, you know. The supplier says he brought this much or that much, so, why the need for a box? We received [the produce] once every two weeks, 25 kg of carrots, so half of the box is equal to half of what he had to bring before. That's how we calculate it, more or less. With cabbage, we count the number of heads, you know. Of the 30 kg of beetroot he has to deliver, he delivered 15 kg. That's more or less how we do it, because we don't have anywhere to weigh (the produce) (representative of managers and staff of the School Food Programme).

Demand fulfilment

Difficulties in maintaining a regular supply of produce were associated with climate-related problems. In order to guarantee a constant supply, the cooperative exchanged produce with neighbouring municipalities. Furthermore, managers and staff of the School Food Programme mentioned that the same food stuff was often purchased through different procurement pro-

cedures: public call for proposals and invitation to tender.

Production difficulties due to climate-related problems were reported by a representative of the farmers' organisation:

I haven't been able to produce anything this year. I'm having problems meeting the demand. First it was the heavy rains which affected the carrots... (representative of the farmers' organisation).

A representative of the farmers' organisation also mentioned exchange of produce with neighbouring municipalities as a strategy to maintain regular delivery:

[...] I manage to find [produce] in other municipalities in which the cooperative works, or the network circuit, or other family farmers in the region (representative of the farmers' organisation).

The purchase of the same type of produce from more than one supplier was mentioned by a representative of managers and staff of the School Food Programme:

But the family farmers' representative said that he could only supply four thousand, so we prepared an invitation to tender for the rest (representative of managers and staff of the School Food Programme).

Occasional problems with the delivery of beans associated with operational problems in the cooperative were mentioned by representatives of managers and staff of the School Food Programme:

There was a problem with the cooperative's bean sorting and grading machine. They were about to buy the machine but it seems that the purchase was delayed. So we went without the produce for almost a month (representative of managers and staff of the School Food Programme).

Fulfilment of produce quality standards

Problems with produce quality were associated with difficulties in complying with the regulatory requirements governing the sale of processed foods. However, the proximity between production and consumption helped to overcome these obstacles.

A representative of managers and staff of the School Food Programme mentioned problems concerning the labelling of food stuffs:

There is also a problem with packaging, a problem we need to review with him [the representative of the farmers' organisation]. Because he is still delivering products in packaging that doesn't have labels, you know... that don't have an expiry

date (representative of managers and staff of the School Food Programme).

According to a representative of managers and staff of the School Food Programme, dialogue established with farmers allowed the development of strategies that ensured that processed foods met the needs of both farmers and consumers:

What's the [biscuit] packaging like? The date of fabrication and expiry date are stamped on the opening of each pack. He packs 10 or 15 kilograms in each larger package. Then he puts the label on the larger package [...]. So each individual biscuit pack has a fabrication and expiry date, but the information for identification is presented on the larger package (representative of managers and staff of the School Food Programme).

In light of the above, representatives of the family farmers' organizations recognise the importance of their relationship with the education department in the implementation of the programme, as the following excerpt shows:

I have no doubt that a large part of the success, the smooth running of the 30%, is due to the mutual understanding between us and the team from the education department. Today, if a problem arises we go and talk, sort the problem out, and there you go. We have a very good dialogue (representative of the farmers' organisation).

Discussion

This study shows that the procurement of family farm produce for use in school food complied with a large number of the recommendations set out by the government for implementing the programme.

With respect to the different stages of the procurement process, it was observed that the programme met the recommendations concerning produce delivery and demand fulfilment. The findings show viable alternatives were provided to guarantee the regular delivery of produce.

However, weaknesses were identified in the elaboration of the public call for proposals (agricultural production was not mapped before elaborating the menus), elaboration of the sales proposal (members of the agricultural reform settlement did not participate in the programme); and fulfilment of produce quality standards (inadequate labelling of certain products). The partial fulfilment of these stages may have a negative effect on the reach of the programme.

Difficulties affecting the regular and constant supply of family farm produce have been high-

lighted as an important obstacle to institutional procurement^{12,15,16}. Given the challenges related to supply, the programme's regulations dispense with the obligation to purchase provided that the seasonality of produce is respected². Furthermore, Vieira and Del Grossi¹⁷ emphasise that the regularity of supply and volume of production (scale) are two of the main factors that determine access to markets.

The findings of this case study show that farmers involved in the programme faced production problems and difficulties in ensuring a regular supply of produce. However, the exchange of produce with neighbouring municipalities and the use of different procurement procedures provided viable alternatives to overcome these obstacles and at the same time stimulate local agricultural production.

Given that the programme seeks to purchase food produced by family farmers, the menus should be designed based on the agricultural potential of the region in question and consider issues such as sustainability, diversity and seasonality^{2,14}. At this stage of the process the nutritionist should map local family farm production with the help of relevant government departments, such as the municipality's department of agriculture and the offices of the Technical Assistance and Rural Extension Company of the relevant state, and farmers' organisations¹⁴.

The dialogue established between nutritionists and family farmers showed that the elaboration of menus may serve as an important tool for planning agricultural production. However, the elaboration of the menu prior to undertaking a survey of local production potentially limits the range of produce in school food and regularity of supply, and may also limit the participation of family farmers, thus restricting programme reach and detracting from the objective of strengthening local agricultural production. In this respect, it is important to remember that the agricultural reform settlement present in the municipality was not included in the procurement process, which is contrary to the regulations that apply to the programme^{2,5}. This suggests a possible destructuring of this segment, highlighting the need for initiatives that seek to include a greater number of family farmers in the programme, prioritising the most vulnerable.

It is also important to emphasize the important role played by the municipal agriculture department and other municipal technical assistance agencies, as coordinating organizations for the procurement of locally-grown produce for

school meals, in mapping agricultural production, publicizing the program and in the development of actions which promote the organization of family farmers.

The municipality investigated by this study purchased organic grape juice and tomato sauce, in line with the legal framework of the PNAE² which highlights the importance of environmental sustainability and organic production and establishes that organic products should be given priority².

Given the environmental and health risks associated with the use of agrochemicals and the lack of control of the responsible and safe use of these substances in Brazil, stimulating organic production is directly related to health promotion¹⁸.

Despite the provisions regarding the prioritization of organic produce, the purchase of such products was at the early stages, whereby items that did not contain agrochemicals but that had not been certified were produced and supplied. This can result in the loss of an important quality attribute and, consequently, added value.

In a study which analysed the supply and demand of organic produce for school food in the State of Santa Catarina in 2010, Silva and Sousa¹⁰ observed that only 17.7% of municipalities purchased organic produce from family farmers. Lack of certification was highlighted as one of the main obstacles.

The present study shows the importance of the relationship and dialogue between the various agents involved in the planning and implementation of the programme. Faced with obstacles to obtaining family farm produce, local agents made efforts to seek viable alternatives to effectuate the purchase. For example, difficulties related to the fulfilment of produce quality standards were overcome by establishing a dialogue and bringing together producers and consumers. These findings are similar to those of a study undertaken by Triches and Schneider⁸ in the South of Brazil which highlighted the importance of communication between the agents involved in the procurement process and farmers. Such communication established a relationship of trust and confidence which allowed agents to exempt farmers from the requirement to use labels or provide certificates based on their knowledge of the production process adopted by these producers.

This government initiative to promote the purchase of locally-grown produce for school meals is an important step towards strengthening

family farming and therefore food security and food sovereignty.

The programme implementers' relationship with the farmers and their experience of local realities observed by this case study revealed important strengths and weaknesses which should be taken into account in order to achieve more far-reaching results.

A recognised limitation of this study is the fact that it encompasses only one of the municipalities in the South Region of Brazil and therefore generalizations should be avoided. However, it should be highlighted that the methodological rigor of the study and deep analysis of the occurrences result in different sources of evidence which enable us to draw important conclusions that would otherwise remain hidden using other research methods.

Conclusion

This study showed that the procurement of family farm produce for school food in a municipality in the State of Santa Catarina was carried out in accordance with a large number of the recommendations set out by the government for implementing the programme.

The produce delivery and demand fulfilment stages of the procurement process were carried out in full accordance with the recommendations, while nonconformities occurred in the elaboration of the public call for proposals, elaboration of the sales proposal, and fulfilment of produce quality standards.

The findings of this study allow us to draw the following conclusions:

- The programme regulations have a positive influence on the procurement of locally-grown produce. Based on these recommendations, local agents coordinated efforts in order to comply with requirements.

- Not carrying out the mapping of family farm production in the region before elaborating the menu may have negative effects on the range of food stuffs included on the menu. On the other hand, taking into account seasonality and planning the elaboration of menus together with family farmers may help to plan production and result in benefits for all those involved in the process.

- The engagement of local agents was decisive for effectuating the purchase of locally-grown produce. Bringing together producers and consumers enabled dialogue, thus helping those

involved to overcome difficulties experienced in implementing the programme.

- Despite programme guidelines which require that preference should be given to food stuffs produced by the most vulnerable groups of farmers, the members of an agricultural reform settlement were not included in the procurement process.

- The exchange of produce between cooperatives and neighbouring municipalities represented a viable alternative for overcoming possible difficulties in ensuring a constant supply of family farm produce under the School Food Programme.

- Despite programme guidelines relating to the purchase of organic produce, these products were not predominant, particularly because of difficulties with certification. This situation reflects the complexity of certification processes,

an aspect which needs further research in order to identify viable alternatives to overcome these obstacles.

- In order to integrate food and agricultural policies, it is necessary to bring together nutritionists, family farmers and agricultural technicians and share decision-making responsibilities during programme planning and implementation.

Despite fulfilling a large part of the recommendations set out by the government, the weaknesses identified by this study need to be overcome. This requires new forms of planning and organisation which involve various agents carrying out coordinated actions in all stages of the process – from food production to consumption in schools – in order to support local family farming and improve the quality of school food in the municipality.

Collaborators

P Soares participated in study conception, in data collection, organisation, analysis and interpretation, and in the drafting of this article and the approval of the final version. SS Martinelli and MC Davó-Blanes participated in data interpretation and in the drafting of this article and approval of the final version. SB Cavalli and L Melgarejo participated in study conception and the organisation of data, and in the critical revision and approval of the final version of this article.

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References

1. Brasil. Constituição da República Federativa do Brasil de 1988. *Diário Oficial da União* 1988; 5 out.
2. Brasil. Fundo Nacional de Desenvolvimento da Educação. Resolução nº 38, 16 de julho de 2009. Dispõe sobre o atendimento da alimentação escolar aos alunos da educação básica no Programa Nacional de Alimentação Escolar - PNAE. *Diário Oficial da União* 2009; 16 jul.
3. Stefanini MLR. *Merenda Escolar: História, Evolução e Contribuição no Atendimento das Necessidades Nutricionais da Criança* [dissertação]. São Paulo: Universidade de São Paulo; 1997.
4. Brasil. Fundo Nacional de Desenvolvimento da Educação (FNDE). *Programas/PNAE, Histórico*. [acessado 2014 mar 25]. Disponível em: <http://www.fnde.gov.br/programas/alimentacao-escolar/alimentacao-escolar-historico>
5. Brasil. Lei nº 11.947 de 16 de junho de 2009. Dispõe sobre o atendimento da alimentação escolar e do Programa Dinheiro Direto na Escola aos alunos da educação básica; altera as Leis nº 10.880, de 9 de junho de 2004, 11.273, de 6 de fevereiro de 2006, 11.507, de 20 de julho de 2007; revoga dispositivos da Medida Provisória nº 2.178-36, de 24 de agosto de 2001, e a Lei nº 8.913, de 12 de julho de 1994; e dá outras providências. *Diário Oficial da União* 2009; 17 jun.
6. Santos SMC, Santos LMP. Avaliação de políticas públicas de segurança alimentar e combate à fome no período de 1995-2002: 1 - Abordagem metodológica. *Cad Saude Publica* 2007; 23(5):1029-1040.
7. Schneider S. *Tendências e temas dos estudos sobre desenvolvimento rural no Brasil*. Congresso Europeu de Sociologia Rural; 2007; Wageningen, Holanda. 2007.
8. Triches RM, Schneider S. Alimentação escolar e agricultura familiar: reconectando o consumo à produção. *Saude Soc*. 2010; 19(4):933-945.
9. Instituto Brasileiro de Geografia e Estatística (IBGE). *Censo agropecuário*. Brasília: IBGE; 2006.
10. Silva APF, Sousa AA. Alimentos orgânicos da agricultura familiar no Programa Nacional de Alimentação Escolar do Estado de Santa Catarina, Brasil. *Revista de Nutrição* 2013;26(6):701-714.
11. Villar BS, Schwartzman F, Januario BL, Ramos JF. Situação dos municípios do estado de São Paulo com relação à compra direta de produtos da agricultura familiar para o Programa Nacional de Alimentação Escolar (PNAE). *Revista Brasileira de Epidemiologia* 2013;16(1):223-226.
12. Saraiva EB, Silva APF, Sousa AA, Cerqueira GF, Chagas CMDs, Toral N. Panorama da compra de alimentos da agricultura familiar para o Programa Nacional de Alimentação Escolar. *Cien Saude Colet* 2013; 18(4):927-935.
13. Toyoyoshi JY, Oliveira R, Santos MSN, Galisa MS, Galante AP. Avaliação da aquisição de gêneros alimentícios provenientes da agricultura familiar para a alimentação escolar. *O mundo da saúde* 2013; 37(3):7.
14. Brasil. Ministério da Educação (ME), Ministério do Desenvolvimento Agrário (MDA). *O encontro da agricultura familiar com a alimentação escolar*. Brasília: ME, MDA; 2009.
15. Sidaner E, Balaban D, Burlandy L. The Brazilian school feeding programme: An example of an integrated programme in support of food and nutrition security. *Public Health Nutrition* 2013; 16(6):989-994.
16. Harris D, Lott M, Lakins V, Bowden B, Kimmons J. Farm to institution: Creating access to healthy local and regional foods. *Adv Nutr* 2012; 3(3):343-349.
17. Vieira DFA, Del-Grossi ME. Influência do programa de aquisição de alimentos na comercialização dos produtos da agricultura familiar: o caso do município de Paracatu em Minas Gerais. *Sociedade e Desenvolvimento Rural* 2010; 4(2):28.
18. Carneiro F, Pignati W, Rigotto R, Augusto L, Rizollo A, Muller N, Alexandre VP, Friedrich K, Mello MSC. *Dossiê Associação Brasileira de Saúde Coletiva (Abrasco): Um alerta sobre os impactos dos agrotóxicos na saúde*. Rio de Janeiro: Abrasco; 2012. Parte 1 - Agrotóxicos, Segurança Alimentar e Saúde.

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