

Purchase of family farm and organic foods by the Brazilian School Food Program in *Santa Catarina* state, Brazil

Aquisição de alimentos da agricultura familiar e orgânicos pelo Programa Nacional de Alimentação Escolar no estado de Santa Catarina

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ABSTRACT

Objective

To describe the purchase of family farm and organic foods by the Brazilian School Food Program in the municipalities of the state of *Santa Catarina*, Brazil.

Methods

This is an analytic and descriptive study conducted from 2010 to 2011. An electronic survey was sent to all 293 *Santa Catarina* municipalities. The Chi-square test investigated the association between the study variables.

Results

Between 2010 and 2011, the number of municipalities that purchased family farm foods increased by 36%, with a total of 96% of *Santa Catarina* municipalities buying family farming foods in 2011. Of the 96%, 70% complied with Article 14 of Law n° 11,947/2009, which determines that at least 30% of the funds provided by the National Fund for the Development of Education should be spent on family farm products, and 48% purchased organic foods. The South was the state region that most complied with Article 14 (85%; $p=0.02$).

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However, as municipality size increased, compliance with Article 14 decreased ($p=0.04$). The municipalities that had the most difficulties buying family farm and organic foods were those with the lowest Municipal Human Development Index and number of students.

Conclusion

Most *Santa Catarina* municipalities purchased family farm foods in 2011, and most municipalities that complied with Article 14 of Law nº 11,947/2009 were in the South state region. Finally, municipalities with low Municipal Human Development Index and number of students had the most difficulties buying family farm foods.

Keywords: Family agriculture. Food organic. School feeding.

RESUMO

Objetivo

Descrever a aquisição de alimentos da agricultura familiar e alimentos orgânicos, no âmbito do Programa Nacional de Alimentação Escolar em municípios catarinenses.

Métodos

Trata-se de pesquisa descritivo-analítica, realizada entre 2010 e 2011. Enviou-se um questionário eletrônico aos 293 municípios catarinenses existentes na época. Testou-se associação entre as variáveis por meio do Qui-quadrado de heterogeneidade.

Resultados

Entre 2010 e 2011, o número de municípios que comprava alimentos da agricultura familiar evoluiu 36%, com um total de 96% comprando deste mercado em 2011. Destes, 70% cumpriam a obrigatoriedade prevista no artigo 14 da Lei nº 11.947/2009 (investir no mínimo 30% dos recursos advindos do Fundo Nacional de Desenvolvimento da Educação na compra da Agricultura Familiar) e 48% compravam alimentos orgânicos. A mesorregião do estado com mais municípios que cumpriam o artigo 14 foi a região Sul (85%; $p=0,02$). Quanto ao porte dos municípios, observou-se que quanto maior era o número de habitantes, menor o percentual de cumprimento do artigo 14 ($p=0,04$). Os municípios que mais relataram dificuldades para a compra de alimentos orgânicos e da agricultura familiar foram os com menor Índice de Desenvolvimento Humano Municipal e com menor número de estudantes.

Conclusão

A maioria dos municípios catarinenses comprou da agricultura familiar em 2011 e a maioria dos que cumprem a meta prevista no artigo 14 da Lei nº 11.947/2009 fica na região Sul do estado. Ainda, municípios com menor Índice de Desenvolvimento Humano Municipal e menos alunos enfrentam mais dificuldades para a execução das compras.

Palavras-chave: Agricultura familiar. Alimentos orgânicos. Alimentação escolar.

INTRODUCTION

Since the 1990s, the *Programa de Apoio à Agricultura Familiar* (Family Farm Support Program) has stimulated a reappraisal of family farming, characterized by its tendency to encourage the production of regional foods [1-3]. This practice promotes the preservation of the local eating habits, diversifies seasonal food production, and supports sustainable development as foods grown locally by family labor do not use large amounts of chemical

inputs [2,3]. Organic farming is a production method that does not use certain inputs, such as synthetic pesticides, chemical fertilizers, veterinary drugs, genetically modified organisms, conservatives, additives, and radiation [1].

The *Programa Nacional de Alimentação Escolar* (PNAE, National School Food Program) is a public food and nutrition policy that supports family farming and the dissemination of organic foods [4,5]. Law nº 11,947, passed on July 16, 2009 [6] and other legal instruments that followed it (Resolutions of the *Fundo*

Nacional de Desenvolvimento da Educação (FNDE, National Fund for the Development of Education) numbers 26/2013 [7] and 4/2015 [8]) established that at least 30% of the funds provided by FNDE should be used for purchasing foods directly from family farms, prioritizing, whenever possible, organic, agroecological, and/or socio-biodiversity foods [6-8]. In this context PNAE is an innovative legislation that induces and potentializes family and organic farmers' identities, valuing these types of production, and simultaneously helps to reduce poverty and food insecurity [9,10]. PNAE also aims to promote the agricultural organization of traditional communities, such as native Brazilians and *quilombolas*, create social strength, improve the local economy, and increase the supply of quality, safe, and sustainable foods [6-10].

Although scarce, some studies have tried to analyze the relationships between family farm, organic foods, and school food in Brazil [3,9-17] and in some federative units [18-20]. In 2010 47.4% of Brazilian municipalities purchased foods from family farms for PNAE, especially in the Brazilian South, with 71.3% of its municipalities doing so [17]. In the state of Santa Catarina, Silverio & Souza [12] found that 60.0% of the municipalities purchased family farm foods for PNAE in 2010 and that some municipalities had difficulties purchasing organic foods. The studies published so far refer to 2010 and have not analyzed yet how the purchase of these foods changed over time. As 2010 was the first year in which the purchase of these foods for schools was compulsory [6], municipalities and farmers probably have been organizing themselves gradually to comply with PNAE rules, and thus, the percent of municipalities purchasing family farm and organic foods has been growing.

Given the above, the present study aimed to analyze the purchase of family farm and organic foods for PNAE in the state of *Santa Catarina*, and how this purchase changed from 2010 to 2011.

METHODS

The present study has a quantitative, cross-sectional, exploratory, descriptive, and analytic design, and it is part of a greater study of all 5,565 Brazilian municipalities conducted in 2012 by the *Centro Colaborador em Alimentação e Nutrição do Escolar de Santa Catarina* (CECANE-SC, *Santa Catarina School Food and Nutrition Collaborating Center*). The present study analyzed the part of the database corresponding to all 293 municipalities existent in *Santa Catarina* when data were collected.

As the greater study is a nationwide census, the primary data were collected by an electronic questionnaire sent to the dietitians responsible for the PNAE and/or to the Secretaries of Education of all Brazilian municipalities. The secondary data were collected from the following sources: population census conducted by *Instituto Brasileiro de Geografia e Estatística* (IBGE, Brazilian Institute of Geography and Statistics) [21], Brazilian Human Development Atlas [22], and the school census conducted by the National Institute for Educational Studies and Researches Anísio Teixeira [23]. These data enabled classifying all 293 *Santa Catarina* municipalities according to geographic state region, population size, Municipal Human Development Index (MIDH), and number of basic education students (kindergarten, elementary school, high school, and education for youth and adults) attending public, philanthropic, and community-entity schools (with government contracts).

The study dependent variables were: family farm and organic foods purchased for PNAE (yes or no); percentage of FNDE funds used for purchasing family farm foods (<30% or ≥30%); and difficulties purchasing family farm and organic foods in *Santa Catarina* (yes or no for each difficulty). The following difficulties were analyzed: food unaffordability; insufficient quantity; insufficient variety; missing documents (*Declaração de Aptidão ao Programa Nacional*

de Incentivo à Agricultura Familiar [Declaration of Aptitude to the National Family Farm Incentive Program by an individual or company]), license provided by the Sanitary Surveillance Agency, invoice, individual or company register at the National Registry of Organic Farmers, distribution difficulties, and poorly trained Municipal Department of Education personnel and farmers.

The study independent variables were: state region, municipality size, Municipal Human Development Index (MHDI), and number of basic education students attending public, philanthropic, and community-entity schools (with government contracts) in *Santa Catarina* municipalities.

The independent variable categories for state region were West, North, *Serrana* Region, *Itajaí* Valley, Greater *Florianópolis*, and South [21]; for municipality size, the categories were based on the number of inhabitants and the methodology used by IBGE: small for municipalities with <20,000 inhabitants, medium-sized for municipalities with 20,000 to 100,000 inhabitants, and large for municipalities with >100,000 inhabitants [21]; for MHDI, the categories were medium for municipalities with Human Development Index (HDI) of 0.60–0.69, high for those with HDI of 0.70–0.79, and very high for those with HDI >0.80 [22]; for number of basic education students, the categories were based on the reference made by the Federal Council of Dietitians of 2010, namely: ≤500; 501 to 1,000; 1,001 to 2,500; 2,501 to 5,000; and >5,001 students [24].

The electronic questionnaires collected data from February to September 2012, and the data were automatically transferred to a Microsoft Excel® spreadsheet. The software Stata (Stata Corporation, College Station, Texas, United States) version 11.0 statistically analyzed the data.

The variables were first analyzed descriptively based on frequency distribution (absolute and percent). The Chi-square test for heterogeneity (χ^2) analyzed the data on family

farm and organic food purchases for PNAE in 2011. It also investigated whether family farm and organic food purchase (outcome) was associated with the exposure variables (MHDI, state region, municipality size, and number of basic education students), and whether the difficulties of purchasing such foods were associated with MHDI and number of basic education students.

In order to compare the purchase of family farm and organic foods in *Santa Catarina* between 2010 and 2011, data were collected from Silva & Souza [16], a 2010 census of all 293 *Santa Catarina* municipalities that consisted of two stages: in the first stage, data were collected by an electronic questionnaire, and in the second stage, the social actors who purchased family farm foods were interviewed face-to-face [16]. The research project was approved by the Human Research Ethics Committee of the *Universidade Federal de Santa Catarina* under Protocol number 21,563.

RESULTS

All 293 *Santa Catarina* municipalities in 2011/2012, the data collection years, participated in the study. Table 1 shows that 96% of the municipalities purchased foods directly from family farms in 2011 for PNAE, especially municipalities located in the South and West state regions. Nevertheless, not all municipalities spent the target minimum of 30% of the funds provided by FNDE to purchase family farm foods, and fewer than half the municipalities purchased organic foods in 2011.

Table 1 also shows that the South was the state region that most complied (85%) with the target spending of at least 30% of FNDE funds on family farm foods, and Greater *Florianópolis* was the state region that least complied (48%) ($p=0.02$). For the association between the variables 'spent at least 30% of FNDE funds on family farm foods' and 'municipality size', the frequencies ranged from 55% to 74%. As

municipality size increased, the frequency of municipalities that spent at least 30% of FNDE funds on family farm foods decreased ($p=0.04$). The other associations were not statistically significant.

Figure 1 compares the years 2010 and 2011, showing that the percent of municipalities (N=293) that purchased organic foods from family farms for PNAE increased considerably from 17.7% to 47.0%. This increase occurred in all *Santa Catarina* regions.

Sixty-two percent and 72% of *Santa Catarina* municipalities had difficulties purchasing family farm and organic foods, respectively. The most frequent difficulties purchasing family farm and organic foods were insufficient variety and missing organic certification, respectively (Table 2). As MHDl increased, the percent of municipalities having the difficulties 'insufficient quantity', and 'insufficient variety' in purchasing from family farmers decreased, but these associations were not statistically significant ($p=0.414$ and 0.078 , respectively).

Table 1. Characterization of the municipalities in *Santa Catarina* by purchase of family farm and organic foods for the *Programa Nacional de Alimentação Escolar* (PNAE, National School Food Program) in 2011.

Distribution by region and municipal characteristics	Total Municipalities	Purchased family farm foods			Spent at least 30% of FNDE funds			Purchased organic foods		
	n	n	%	p^*	n	%	p^*	n	%	p^*
<i>Santa Catarina</i>	293	281	96		207	70		141	48	
<i>State region</i>										
West	118	116	98		93	79		51	43	
North	26	25	96		18	69		9	35	
Serrana	30	29	97	0.10	20	67	0.02 ^a	18	60	0.32
<i>Itajaí Valley</i>	54	51	94		31	57		28	52	
<i>Greater Florianópolis</i>	21	17	81		10	48		10	48	
South	44	43	98		35	85		25	57	
<i>Municipality size (inhabitants)</i>										
Small (<20,000)	228	218	96		169	74		110	48	
Medium-sized (from 20,001 to 100,000)	54	52	96	0.79	32	63	0.04 ^a	26	48	0.97
Large (>100,001)	11	11	100		6	55		5	45	
<i>MHDI</i>										
Medium (0.60–0.69)	61	56	91		39	64		35	57	
High (0.701–0.79)	221	214	96	0.36	159	75	0.68	102	46	0.21
Very high (>0.80)	11	11	100		9	82		4	36	
<i>Number of students</i>										
≤500	107	102	95		78	73		54	50	
501–1000	72	69	96		51	71		39	54	
1001–2500	62	60	97	0.78	47	80	0.30	39	47	0.35
2501–5000	23	23	100		15	65		8	35	
>5001	29	27	93		16	55		11	38	

Note: *Chi-square test for heterogeneity. ^aStatistically significant value.

FNDE: *Fundo Nacional de Desenvolvimento da Educação* (National Fund for the Development of Education); MHDI: Municipal Human Development Index.

An inverse association was found between increasing MHDl and the difficulties 'insufficient quantity' 'insufficient variety' 'missing organic certification' and 'poor training' when purchasing organic food, but only 'insufficient variety' was statistically significant

($p=0.031$). In these cases as MHDl increased, the frequency of these difficulties decreased. Moreover, food unaffordability was reported most frequently by municipalities with higher MHDl, but this association was not statistically significant ($p=0.303$) (Table 2).

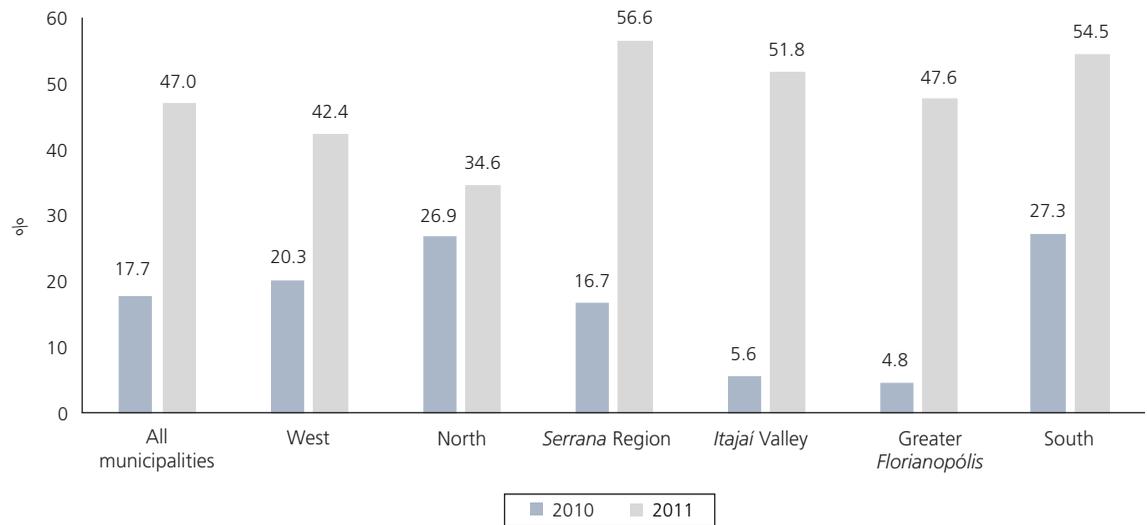


Figure 1. Percentages of the 293 municipalities in the state of Santa Catarina that purchased family farm and organic foods in 2010 and 2011 by state region.

Table 2. Distribution of municipalities' main difficulties purchasing family farm (183 municipalities) and organic (212 municipalities) foods for the National School Food Program (PNAE) in 2011 by Municipal Human Development Index.

Difficulties	Santa Catarina		Medium		High		Very high		p^b
	n	% ^a	n	% ^a	n	% ^a	n	% ^a	
Difficulties purchasing family farm foods									
IQ	90	49	24	54	62	48	4	44	0.414
IV	122	67	32	73	87	67	3	33	0.078
MD	49	27	12	27	33	25	4	44	0.650
DC	61	33	11	25	47	36	3	33	0.254
PT	85	46	5	11	8	6	0	0	0.152
Difficulties purchasing organic foods									
IQ	123	58	27	60	91	58	5	56	0.745
UF	73	34	13	21	56	25	4	36	0.303
IV	118	56	33	16	79	37	6	3	0.031 ^c
PT	84	40	3	7	6	4	0	0	0.293
MOC	134	63	7	16	25	16	1	11	0.875

Note: ^aPercentual values were rounded to the entire nearest number; ^bChi-square test for trend p -value; ^cStatistically significant value.

IQ: Insufficient Quantity; IV: Insufficient Variety; MD: Missing Documents; DC: Distribution Challenges; PT: Poor Training of Municipal Department of Education personnel and farmers; UF: Unaffordability; MOC: Missing Organic Certification.

An inverse association was found between the number of basic education students and the difficulties 'insufficient quantity' ($p=0.015$) and insufficient variety ($p=0.010$) (Table 3). In other words as the number of students decreased, the difficulties purchasing family farm products increased.

Table 3 also shows that as the number of basic education students increased, the frequency of the difficulty 'missing organic certification' also increased, but the increase was not statistically significant ($p=0.475$).

DISCUSSION

Almost all *Santa Catarina* municipalities (96.0%) purchased foods from family farms for schools in 2011, an increase from 2010. Between 2004 and 2008, 30.8% of *Santa Catarina* municipalities were already purchasing foods from family farms most likely due to the *Programa de Aquisição de Alimentos* (PAA,

Food Acquisition Program), launched in 2003 [16], and to the *Plano Safra da Agricultura Familiar* (Family Farm Harvest Plan), launched in 2002 [25]. These voluntary efforts combined especially with Law nº 11,947/2009 [6] may have contributed to the growing number of *Santa Catarina* municipalities that purchased family farm foods for schools. Article 5 of the law mentioned above also includes high schools and schools for youth and adults [6]. Thus, both the compulsory nature of the purchase and the higher number of meals served since 2009 must have fueled the increasing number of *Santa Catarina* municipalities that purchased family farm foods. Since 2010 was the first year after the law was passed, it probably served as an experiment both to the entities that purchased the foods and to the farmers, who increased their performance in 2011 as they became familiar with institutional purchases. Other reasons for the increasing number of municipalities that purchased family farm foods may also be related to the better social control performed

Table 3. Distribution of municipalities main difficulties purchasing family farm (183 municipalities) and organic (212 municipalities) foods in 2011 for the National School Food Program (PNAE) by number of students.

Difficulties	Number of students												p^b
	<i>Santa Catarina</i>		≤500		501–1000		1001–2500		2501–5000		≥5000		
	n	% ^a	n	%	n	%	n	%	n	%	n	%	
Difficulties purchasing family farm foods													
IQ	90	49	39	58	22	55	16	41	5	33	8	36	0.015 ^c
IV	122	67	49	73	30	75	24	62	9	60	10	45	0.010 ^c
MD	49	27	19	28	8	20	11	28	5	33	6	27	0.826
DC	61	33	23	34	13	33	12	31	7	47	6	27	0.848
PT	85	46	5	7	1	3	4	10	0	0	3	14	0.504
Difficulties purchasing organic foods													
IQ	123	58	40	51	30	59	30	67	11	69	12	55	0.276
UF	73	34	25	32	13	25	17	38	7	44	11	50	0.068
IV	118	56	42	55	29	57	26	58	9	56	12	52	0.966
PT	84	40	5	6	1	2	2	4	0	0	1	4	0.678
MOC	134	63	12	15	7	14	7	16	3	19	4	18	0.475

Note: ^aPercentual values were rounded to the entire nearest number; ^bChi-square test for trend p -value; ^cStatistically significant value.

IQ: Insufficient Quantity; IV: Insufficient Variety; MD: Missing Documents; DC: Distribution Challenges; PT: Poor Training of Municipal Department of Education personnel and farmers; UF: Unaffordability; MOC: Missing Organic Certification.

by the School Food Councils, to the elimination of the need of bidding for such purchases, and to the efforts of dietitians and managers. Law n° 11,947/2009 also clarified the councils' role in school food purchases and dietitians' attributions [6]. In addition, the work of CECANE-SC with *Santa Catarina* municipalities may also have strengthened the administrative actions related to the purchase of family farm foods. Barbosa & Almeida [26] pointed out the contribution of CECANE of the *Universidade Federal de Goiás* to the coordination of a *Comitê de Apoio à Agricultura Familiar* (Family Farm Support Committee). *Comitê de Apoio à Agricultura Familiar* aimed to discuss the obstacles related to Law n° 11,947/2009 and the law's effectiveness, and to propose strategies for carrying out the program.

The West and South were the state regions with the highest percentages of municipalities purchasing family farm foods in 2011, not taking into account the percent of FNDE spent. These state regions had the highest number of family farmers and cooperatives in this period [16], which probably contributed to a higher supply of these foods. In this context FNDE also had a critical role because as it regulated PNAE, it established that the school menu should consist mostly by basic foods, and that 30% of its funds should be spent on the purchase of family farm foods [6-8].

Regardless of this positive picture, 30% of *Santa Catarina* municipalities did not comply with Law n° 11,947/2009 [6], that is, they did not spend at least 30% of FNDE funds on family farm foods. This may be due to the difficulties the municipal PNAE managers had purchasing these foods, especially insufficient quantity and variety in municipalities with low number of basic education students. Gonçalves *et al.* [13] found that low family farmers' interest and poor hygiene were the main difficulties municipalities had purchasing family farm foods. According to Triches & Schneider [3], the barriers to farmer formalization were the bureaucracy of bidding

(which still happens in some municipalities), compliance of locally processed foods with the legal quality standards, sanitary issues, and proving compliance with the formalities. Hence, following the dialogue between the entities that purchase foods for PNAE and family farm organizations seems critical, especially with respect to production planning, schedule, and diversity, and the understanding of the purchasing entities of the specificities of the new law, especially in smaller municipalities [14]. Additionally, menu planning based on food seasonality and health promotion practices, and references of environmental, cultural, social, and economic sustainability are fundamental to make this purchase effective [17].

Forty-eight percent of *Santa Catarina* municipalities purchased organic foods in 2011. Moreover, 47.0% of the municipalities purchased organic foods from family farms. According to Silva & Sousa [16], 17.7% of *Santa Catarina* municipalities purchased organic foods from family farms in 2010. Thus, in a single year, the percent of municipalities that purchased organic foods from family farms increased more than 2.5 times. As a strategy to further strengthen the process of family farm and organic food purchase for PNAE, FNDE published Resolution 4 of 2015 [8], revising part of the articles of Resolution/CD/FNDE n° 26 of 2013 [7] related to the purchase of family farm and organic foods. One of the changes increased the divulgence of request for tenders to local family farm organizations and entities of technical assistance and rural extension. In addition, those regulations implemented strategies for prioritizing the purchase of foods from traditional communities (land reform settlements, native Brazilian communities, and *quilombolas*). To encourage the purchase of organic and locally processed foods, the law established that, if comparison shopping not possible, the purchaser may pay up to 30% more for those foods than for conventional items [7,8].

A study that assessed the inclusion of organic foods in school meals in the rural municipalities of *Rio Grande do Sul* found that the main motivations for including organic foods were: students' health (80.9%), dietitian request (66.7%), local economy stimulation (57.1%), municipality motivation (33.3%), and price competitiveness (14.3%) [11]. However, these percentages may have increased in 2013/2016 because of FNDE's issuance of Resolutions nº 26/2013 [7] and 4/2015 [8], which required prioritization of organic, agroecological, and/or socio-biodiversity foods whenever possible, and cancelled the need of bidding. Similarly, the government instituted the *Política Nacional de Agroecologia e Produção Orgânica* (PNAPO, National Agro-ecology and Organic Food Production Policy) in 2012 [27] and the *Plano Nacional de Agroecologia e Produção Orgânica* (PLANAPO, National Agro-ecology and Organic Food Production Plan) in 2013 [28], which also established strategies for prioritizing the purchase of socio-biodiversity, organic, and agroecological foods for PNAE. One of PLANAPO's goals is to encourage spending at least 5% of the funds sent to states and municipalities for PNAE on organic or agroecological foods until 2015 [28].

However, some difficulties still hinder the purchase of organic foods, especially insufficient variety in municipalities with low MHDI, according to the present study. Of the 61 *Santa Catarina* municipalities with medium MHDI [22], 72% are located in the *Serrana* and West state regions [21]. Either their supply systems are poorly organized or the family farms are producing the same foods, limiting variety. Silva & Sousa [16] reported that the farmers of these regions sold most of their harvest locally in 2010. Importantly, this study analyzed information provided by respondents, not by documents, so other difficulties may be associated with purchasing these foods.

The Census of Agriculture of 2006 [29] found low organic food production in Brazil. Only 1.8% of all agricultural establishments

produced organic foods, and 54.0% of organic food producers were not in cooperatives and/or did not belong to trade unions, professional associations, councils, federations, and so on [29]. These factors may also contribute to the limited supply of organic foods. Many institutions are responsible for the certification of organic foods, such as the Ministry of Agricultural Development, *Organismo Participativo da Avaliação da Conformidade* (Participatory Body for Compliance Assessment), *Sistema de Avaliação de Conformidade Orgânica* (Organic Compliance Assessment System), *Agência Nacional de Vigilância Sanitária* (National Sanitary Surveillance Agency), and *Sistema Único de Atenção à Sanidade Agropecuária* (Unified Agricultural Sanity Care System), and their trade requires many documents, namely the *Cadastro Nacional de Produtores Orgânicos* (National Organic Producer Register), individual or company Declaration of Aptitude, and invoice. Therefore, employees of those entities and farmers may have difficulties finding information about certification and the required documents [30]. The results of this study indicate the need of more incentives for the purchase of family farm and organic foods for PNAE in *Santa Catarina* municipalities, especially those with low MHDI.

Finally, the use of e-mail-based questionnaires instead of face-to-face interviews and the study subjects' response bias could also be study limitations. Nonetheless, given that this data collection method enabled the participation of all *Santa Catarina* municipalities in 2011, a census simultaneously represents a study strength.

CONCLUSION

Most municipalities in the state of *Santa Catarina* purchased family farm foods in 2011. Yet, one third of them did not comply with Law nº 11,947/2009 because they did not spend the minimum required percentage on family farm foods. The South was the state region with the

highest number of compliant municipalities, and as municipality size increased, compliance decreased. Roughly half of the municipalities in *Santa Catarina* purchased organic foods for school meals in 2011.

The most frequent difficulties the municipalities had purchasing family farm foods were insufficient quantity and variety; and organic foods, missing organic certification. Greater *Florianópolis* was the state region with the highest prevalence of municipalities having difficulties purchasing family farm and organic foods. In conclusion, these difficulties indicate that public policies, actions, and programs, such as PNAPO, the Harvest Plan, and the Food Acquisition Program, have to further incentivize family and organic farming, especially in the larger municipalities of *Santa Catarina*.

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CONTRIBUTORS

ALA CASTELLANI and T TRENTINI analyzed and interpreted data, and wrote the article. FAG VASCONCELOS conceived and designed the study, and reviewed the article. W NISHIDA analyzed and interpreted data. CE ROSSI and LCF COSTA wrote and reviewed the article. All authors approved the final version of the article.

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