

Environmental, social and health dimensions of food supply policies and proposals in Brazil

As dimensões ambientais, sociais e de saúde das políticas e propostas de abastecimento alimentar no Brasil

Douglas Souza PEREIRA¹  0000-0002-3033-4170

Elisabetta RECINE¹  0000-0002-5953-7094

ABSTRACT

Objective

To analyze the presence and characteristics of social, environmental and health dimensions identified in the current national food supply policy proposals and policies.

Methods

This is a study with a qualitative approach using a documentary analysis technique referring to the period between 2003 and 2015, in addition to the Agricultural Policy of 1991.

Results

The results of the analyzes of the documents of the Federal Executive Power and the Public Policy Councils are similar, policies that seek alternatives to the negative impacts of the hegemonic model of food supply, different from the document of the Federal Legislative Power and Agricultural Policy, which superficially approach alternatives to these impacts, or are limited to strengthening the dominant productive system.

Conclusion

Thus, a national food supply policy is needed for the planning of actions, considering social, environmental and health impacts and taking as reference the initiatives already built by sectors of the Executive Power and by the Public Policy Councils.

Keywords: Environment. Food Supply. Health. Public policy. Rural development.

¹ Universidade de Brasília, Faculdade de Saúde, Departamento de Nutrição. Campus Universitário Darcy Ribeiro, s/n., Asa Norte, 70910-900, Brasília, DF, Brasil. *Correspondência para/Correspondence to:* E RECINE. E-mail: <recine@unb.br>.

Article based on the dissertation thesis by DS PEREIRA, entitled “*Aspectos ambientais, sociais e de saúde das políticas e propostas de abastecimento alimentar no Brasil*”. Universidade de Brasília; 2017.

Como citar este artigo/How to cite this article

Pereira DS, Recine E. Environmental, social and health dimensions of food supply policies and proposals in Brazil. Rev Nutr. 2018;31(5):501-8. <http://dx.doi.org/10.1590/1678-98652018000500007>



RESUMO

Objetivo

Analisar a presença e características das dimensões sociais, ambientais e de saúde identificadas nas atuais propostas e políticas nacionais relacionadas ao abastecimento alimentar.

Métodos

Trata-se de um estudo com abordagem qualitativa com técnica de análise documental tendo como referência o período de 2003 a 2015, além da Política Agrícola de 1991.

Resultados

Os resultados das análises dos documentos do Poder Executivo Federal e dos Conselhos de Política Pública se assemelham, ao proporem políticas que buscam alternativas aos impactos negativos do modelo hegemônico de abastecimento alimentar, diferente do documento do Poder Legislativo Federal e da Política Agrícola, que abordam superficialmente alternativas a esses impactos, ou limitam-se ao fortalecimento do sistema produtivo dominante.

Conclusão

Assim, é necessária uma política nacional de abastecimento alimentar para o ordenamento das ações, considerando os impactos sociais, ambientais e de saúde e tendo como referência as iniciativas já construídas por setores do Poder Executivo e pelos Conselhos de Política Pública.

Palavras-chave: Meio ambiente. Abastecimento de alimentos. Saúde. Política pública. Desenvolvimento rural.

INTRODUCTION

Nowadays, in different countries, fewer and fewer people live off food production and more people become consumers [1]. This is largely due to the adoption of a global model of industrialized food supply [1,2].

This model of food supply has significant impacts on the environment, such as increased greenhouse gas emissions. The origin of these impacts is, above all, in the industrialization of agricultural practices to maximize productivity and economic gains [2]. This model entails the loss of biodiversity and intensive extraction, soil contamination and pollution of water resources through the use of chemical fertilizers and agrochemicals [1].

On the other hand, local and pluralistic rural development, with reference to food and nutrition security-SAN and environmental sustainability [3,4], as well as family farming, have the potential of social and environmental transformations in the local relations of food supply [5]. The social connection that occurs between consumers and producers in local food systems allows a transition from conventional

production methods – of high environmental impact – to an agroecological production. The production of healthy food via family-based agriculture can strengthen the connection between people and their food, as well as encourage healthier and more conscious food choices [1,2,6,7].

The most marginalized in this hegemonic model of food supply – low-income people with limited physical and financial access to food – are the most affected by the effects of a poor diet. It is no coincidence that a lot of the growth in obesity and chronic diseases rates occurs in developing countries undergoing a nutritional transition, where the consumption of ultraprocessed products with high indexes of fat, sugar, sodium, and additives is increasing, driven by urbanization and globalization, replacing the nutritious and traditional foods of their diets [1,8-10].

The externalities presented may occur, among other reasons, due to a gap between the discussion and the need for a national food supply policy, one that is integrated between federal entities and society, as a social demand and the already existing policies and diffuse proposals on food supply in Brazil [11].

This policy could be an institutional competence of the *Companhia Nacional de Abastecimento* (Conab, National Supply Company), since the current food supply is strongly influenced by large supermarket chains that dictate quality and rules for foods to be offered to the population. At the same time, the State Supply Centers are decentralized to the states, and are mostly managed by private concessionaires [12].

That being said, the study adopted as a reference for analysis the multidimensional concept of the *Conselho Nacional de Segurança Alimentar e Nutricional* (Food and Nutritional Security National Council) [3]:

[...] the diverse set of activities mediating food production and consumption, which allows for the articulation of the promotion of a socially equitable, environmentally sustainable and culturally appropriate production models and the expansion of access to adequate and healthy food (p.21).

Thus, the objective of this study was to analyze the presence and characteristics of environmental dimensions, rural development and human health promotion in food supply proposals and policies of the *Poder Executivo Federal* (PEF, Federal Executive Branch), *Poder Legislativo Federal* (PLF, Federal Legislative Branch) and *Conselhos de Política Pública* (CPP, Public Policy Councils) in Brazil.

METHODS

This paper is a study with a qualitative approach, to which was adopted the technique of documentary analysis. The challenge of this technique lies in the researcher's criteria in selecting, treating and interpreting the information, in order to understand the interaction with its source [13,14].

Its aim was to understand not only the presence or absence of social (rural development and access to food), environmental (agroecology,

sustainable production and supply, environmental diversity etc.) and health (food and nutrition security, healthy eating habits, obesity etc.) dimensions on food supply, but to understand the forces and motivations that led to the construction of these documents, using the dialectical conception in the analysis – as a method of investigating empirical facts of reality in the form of a pattern of contradictory relations [15].

The following criteria was used to select documents for this study: those that approach the perspective of food supply in their contents and at the same time are strategic, i.e. in relation to the PEF, documents that have passed through public policy councils; to the PLF, the existence of a Bill on food supply being discussed in the Legislative Branch; and to the CPP, documents with formal proposals on food supply being sent to the PEF.

The selected PEF documents were the *Política Agrícola* (PA, Agricultural Policy), Law No.8.171, dated January 17, 1991 [16]; the *Programa de Aquisição de Alimentos* (PAA, Food Acquisition Program), Law No.10.696, dated July 2, 2003 [17]; the *Política Nacional de Segurança Alimentar e Nutricional* (PNSAN, National Policy on Food and Nutrition Security), Decree No.7.272, dated August 25, 2010 [18] and the *Política Nacional de Agroecologia e Produção Orgânica* (PNAPO, National Policy on Agroecology and Organic Production), Decree No.7.794, dated August 20, 2012 [19].

The CPP documents were the National Council for Sustainable Rural Development – *Lei da Política de Desenvolvimento do Brasil Rural* (PDBR, Brazilian Rural Development Policy Bill) of 2010 [20]; the Explanatory Memorandum No.011/2012/Consea, which proposes a *Política Nacional de Abastecimento Alimentar* (PNAA, National Food Supply Policy) [11] and the Political Charter of the 5th National Conference on Food and Nutrition Security, 2015 [21].

From the PLF, the document selected was the Bill No.59, of 2015, that establishes the National Plan of Supply of Poultry and Vegetable Products (Planhort) [22].

Through the content analysis method, textual readings were carried out, identifying the units of analysis in the categories “Environment”, “Human Health” and “Rural Development”, that is, articles or fragments of texts that refer to the health, environment and rural development in food supply. These units were considered to approximate or exclude these documents from the concept of food supply (but also from rural development, environmental conservation and human health promotion) used as reference in this study.

The criteria of organization of the units of analysis within a category followed the precepts of internal and external homogeneity, inclusiveness, coherence and plausibility of the documents and their units. Finally, the system was enriched through category analysis and iterative revisions to documents [23].

RESULTS AND DISCUSSION

Starting from the dialectical analysis of the content and the objectives of the documents [15], it is understood that much of the PEF and CPP documents converge to a model which is similar to the adopted food supply reference, compared to the PA and Planhort. The PEF and CPP documents resemble the vision of plurality of sustainable and inclusive activities in rural areas, as opposed to the hegemonic model of food supply, industrialized, global and based on few food crops, a model that is present in both the PA and Planhort documents, as highlighted in Figure 1 and detailed in this chapter.

In this understanding, the analyzed documents of the PEF from the perspective of rural development meet the other proposals of the CPP, as is the case of the PAA, PNAP and PNSAN. The rural development claimed by the PDBR, PNAA and by the Political Charter aims for social and economic integration in the rural environment, especially, the family-based farmers. The proposals of the Councils aim to rescue and insert these farmers as representatives

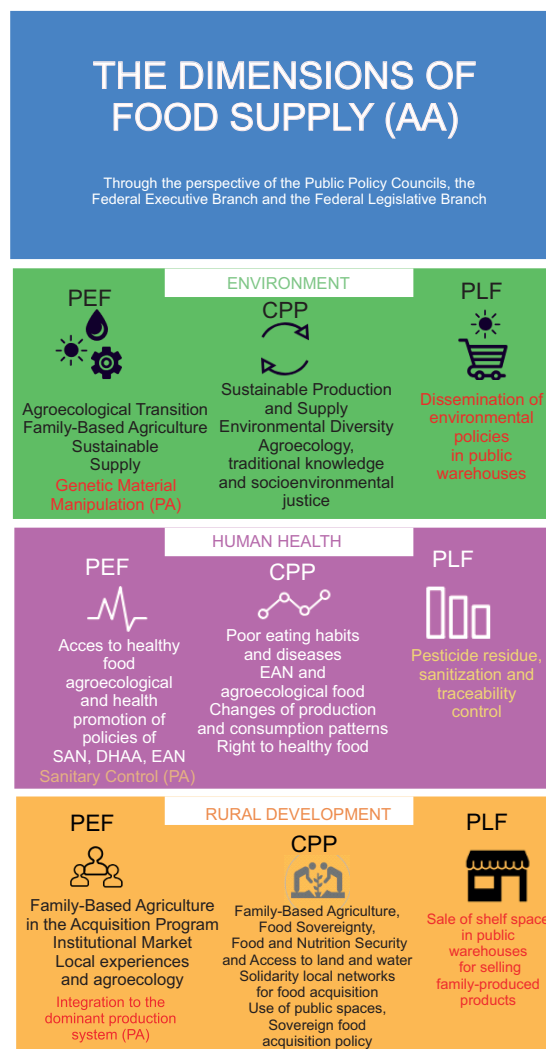


Figure 1. The dimensions of food supply in policies and proposals in Brazil.

Note: PEF: Federal Executive Branch; PLF: Federal Legislative Branch; CPP: Public Policy Councils.

Source: Elaborated by the authors (2018).

of a relevant productive sector in the Brazilian economy, politics and culture [6,9,24,25].

The PLF initiative in the construction of the Planhort and the PA adopts a concept of rural development that aims for technological advance to stimulate the increase of productivity and agro-industrialization as its main factor. This is because the initiatives aimed at family-based agriculture and agroecological production are aimed at bringing them closer to the hegemonic

food supply model as quickly as possible, but without explaining how to overcome its negative impacts [26].

At the same time, the PEF and CPP documents discuss actions related to *Soberania Alimentar* (SA, National Food Sovereignty) – ensuring the conditions necessary for communities to adopt and develop the best food supply model that guarantees the right to adequate and healthy food [6] – and aim at their own actions to build policies that guarantee Food and Nutrition Security, preserving the environmentally sustainable practices of food supply [1,2,5,7,27]. In them, the environment is a structuring element of supply actions and policies [25,27].

In the proposals of the Councils, the concern for the environment is fundamental for the reduction of social and regional inequalities (PDBR), defense of socio-biodiversity and agroecology (PNAA) and protection of biodiversity and traditional peoples and communities, with measures taken to allow their access to local markets, the means of production, the goods of nature and seeds (Political Charter), aiming for SA.

It should be noted that in 2012, with the publication of the PNAPO in the scope of the PEF, Brazil became, alongside Nicaragua [28], one of the only countries to create a State policy to promote the agroecological transition and organic production – in the case of Brazil, due to two factors, firstly the mobilization and organization of civil society around the SA, secondly, the expansion of democratic governance spaces within the scope of the PEF [27] – but important institutional challenges remain as obstacles for its implementation, due to the logic of state and agribusiness corporations interventions in the actions of food production and supply [29].

Differently, both the PA and the Planhort do not establish their conceptual bases in the sustainability of food production and supply, approaching the subject in an indirect, contradictory way (PA), sometimes direct, but

shallow way (Planhort). The Agricultural Policy, for example, addresses the environmental issue in a contradictory way by shedding light on the environmental impacts caused by increased production and commercialization of agricultural products, but at the same time provides for the implementation of activities potentially promoting environmental degradation, such as prioritization in the manipulation and use of genetically modified materials in agriculture [26].

The superficial approach to environmental impact in the Planhort food supply is to transform public warehouses into privileged spaces for the execution and diffusion of environmental preservation policies. Therefore, besides not being unanimous, the environmental issue is a secondary issue in the Planhort, since it does not discuss models of food production and supply from an environmental perspective, nor does it discuss the incentive and valuation of a transition to organic or agroecological production.

The pressure on environmental resources to favor un-diversified and non-SAN guided food production also has negative health impacts [27]. The direct approach of human health in the food supply in proposals (CPP) and policies (PEF) in Brazil is related to SAN, despite the limitation of the topic in the PA. Even after modifications of some of the provisions of the Agricultural Policy Bill [26], sanitary control of animal and plant products and some production processes, such as industrial inspection and pest and disease control in agricultural production, remains the only issue the Agricultural Policy (PA) relates to human health.

That is, the main focus of the PA, as in the Planhort, is on the product – since it addresses the health concern only with the forecast of a quality program of the products marketed, through analysis and control of residues and other toxic substances contained in the products. The main objective of the PA and the Planhort is therefore to ensure the increase of agricultural

production and productivity and to guarantee the quality of products of agricultural origin, their derivatives and residues of economic value, not relating healthy food, consumption nor the access to these foods in order to promote human health from the perspective of SAN policies, highlighting different and often dialectically contradictory views among the analyzed political entities [15].

In the quest to change this paradigm, the promotion of human health in the PNSAN, the PNAA and the Political Charter is articulated with the strengthening of family-based agriculture, agroecological transition, food regulation, education and permanent research on food and nutrition, aimed at forming a critical society in relation to what is eaten. The Political Charter, for example, advocates the creation of a sovereign food supply policy that favors availability and access to healthy food.

In addition, it should be noted that insufficient financial resources by part of the population, along with food prices – and the existence of physical barriers to healthy food – are the elementary factors that prevent a considerable part of the population from having access to healthy food [6,9,10,30,31]. Although the access to healthy food is a key point of Food and Nutrition Security public policies in Brazil, it is not yet evident in the PEF, PLF, and CPP proposals, how this can happen effectively. The PLF and PA documents present greater challenges in terms of access to healthy food, sustainable production and rural development, as no part of these two documents internalizes such concerns in a structural way.

Therefore, in the dialectical perspective, this is the great contradiction stressed of the hegemonic model of food supply, which leads to disputes of supply models that seek the solution for food access.

CONCLUSION

Considering the critical analysis of the hegemonic model of food supply by means of

the social, environmental and health dimensions present in the documents, it is considered that family-based agriculture and agroecological production are two central themes for the construction of a model of food supply for the PEF and CPP. This common model between the two political entities aims not only to preserve the environment and the valuation of healthy and diverse foods, but the valuation of SA and the promotion of human health and rural development.

One explanation for this closeness of understanding between CPP and PEF documents was the increasing participation and social control in the evaluation, discussion, proposition, execution and monitoring of government policies in Brazil, especially from 2003 to 2015. This relationship of greater participation in food supply policies influenced the promotion of SA, which is present in these documents.

On the other hand, the superficiality, contradiction and invisibility given to alternative models of food supply and the search for the strengthening of the hegemonic model of food supply govern the actions of the Agricultural Policy and the Planhort. The Agricultural Policy seeks the integration between agricultural models of production and supply to the hegemonic model, in which, despite predicting the protection of the environment, encourages the insertion of family-based agriculture into the dominant logic of production and supply; and reduces the discussion of food supply and human health to the perspective of sanitary control of animal and vegetable products. In the Planhort, public warehouses should provide space for family-based agriculture and maintain control of pesticide residues, sanitation, and traceability as a way of promoting human health.

To this scenario of contradictions and asymmetries, reflected when comparing the different documents, it adds up to the fact that Brazil does not have a national food supply policy in place, which orders and regulates its actions at national, state, local and territorial

levels. Therefore, considering the confrontation that the CPP and PEF documents make to the negative impacts of the hegemonic model of food supply, this national policy should be, above all, sovereign, with the democratization of the marketing systems through the support of local short cycles of production and consumption for the rural and urban population.

Finally, insufficient studies on innovative initiatives in food supply models and, above all, on the negative impacts of the hegemonic globalized supply model delegate to society to increasingly assume environmental, social and health costs of production, distribution, access and consumption processes of food in Brazil. It is evaluated that the study can contribute to the strengthening of an insufficient field of analysis in Brazil and that could be complemented with interviews with agents involved in the elaboration of proposals and food supply policies to better delimit fields of intersection and dispute.

CONTRIBUTORS

DS PEREIRA and E RECINE worked in an articulate and simultaneous way in all stages of the construction process of this manuscript: theoretical conception, literature survey and revision, analysis and discussion of the results, writing and final revision of the article.

ACKNOWLEDGMENTS

The Social Demand Program, the Coordination for the Qualification of Higher Education Personnel, the financial support granted and the Graduate Program in Human Nutrition, University of Brasilia.

REFERENCES

- Garnett T. Food sustainability: Problems, perspectives and solutions. *Proc Nutr Soc.* 2013;72(1):29-39. <http://dx.doi.org/10.1017/S0029665112002947>
- O'Kane G. What is the real cost of our food? Implications for the environment, society and public health nutrition. *Public Health Nutr.* 2011;15(2):268-76. <http://dx.doi.org/10.1017/S136898001100142X>
- Conselho Nacional de Segurança Alimentar e Nutricional. *Análise dos indicadores de Segurança Alimentar e Nutricional*. Brasília: Consea; 2014 [acesso 2018 fev 5]. Disponível em: <http://www.agroecologia.org.br/files/importedmedia/analise-dos-indicadores-de-seguranca-alimentar-e-nutricional.pdf>
- Kageyama A. Desenvolvimento rural: conceito e medida. *Cad Ciênc Tecnol.* 2004;21(3):379-408.
- Dumont AM, Vanloqueren G, Stassart PM, Baret PV. Clarifying the socioeconomic dimensions of agroecology: Between principles and practices. *Agroecol Sus Food.* 2016;40(1):24-7. <http://dx.doi.org/10.1080/21683565.2015.1089967>
- Viegas MT. *Agroecologia e circuitos curtos de comercialização num contexto de convencionalização da agricultura orgânica [dissertação]*. Florianópolis: Universidade Federal de Santa Catarina; 2016.
- Oliveira FC, Collado AC, Leite LFC. Autonomy and sustainability: An integrated analysis of the development of new approaches to agrosystem management in family-based farming in Carnaubais Territory, Piauí, Brazil. *Agric Sys.* 2013;115:1-9. <http://dx.doi.org/10.1016/j.agsy.2012.09.005>
- Martins APB, Levy RB, Claro RM, Moubarac J, Monteiro CA. Participação crescente de produtos ultraprocessados na dieta brasileira (1987-2009). *Rev Saúde Pública.* 2013;47(4):656-65. <http://dx.doi.org/10.1590/S0034-8910.2013047004968>
- Brasil. Ministério da Saúde. *Vigitel Brasil 2017*. Brasília: Ministério da Saúde; 2018 [acesso 2018 out 17]. Disponível em: http://bvsms.saude.gov.br/bvs/publicacoes/vigitel_brasil_2017_vigilancia_fatores_riscos.pdf
- United States. United States Department of Agriculture. Food access research data-documentation. *Econ Res Serv.* 2017 [cited 2018 Feb 8]. Available from: <https://www.ers.usda.gov/data-products/food-access-research-atlas/download-the-data/>
- Conselho Nacional de Segurança Alimentar e Nutricional. *Exposição de Motivo nº011/2012/Consea*. Brasília: Consea; 2012 [acesso 2018 out 26]. Disponível em: <http://www4.planalto.gov.br/consea/eventos/plenarias/exposicoes-de-motivos>
- Wegner RC, Belik W. Distribuição de hortifruti no Brasil: papel das centrais de abastecimento e dos supermercados. *Cuad Desarro Rural.* 2012;9(69):195-220.
- Kripka RML, Scheller M, Bonotto DL. Pesquisa documental: considerações sobre conceitos e

- características na pesquisa qualitativa. *Atas CIAIQ*. 2015;2:243-7.
14. Flick U. Uma introdução à pesquisa qualitativa. Porto Alegre: Artmed; 2009.
 15. Frigotto G. O enfoque da dialética materialista histórica na pesquisa educacional. In: Fazenda I. Metodologia da pesquisa organizacional. São Paulo: Cortez; 2000.
 16. Brasil. Presidência da República. Lei nº8.171, de 17 de janeiro de 1991. Dispõe sobre a Política Agrícola. Brasília: Câmara dos Deputados; 1991 [acesso 2018 nov 22]. Disponível em: <http://www2.camara.leg.br/legin/fed/lei/1991/lei-8171-17-janeiro-1991-365106-publicacaooriginal-1-pl.html>
 17. Brasil. Presidência da República. Lei nº10.696, de 2 de julho de 2003. Dispõe sobre a repactuação e o alongamento de dívidas oriundas de operações de crédito rural, e dá outras providências. Institui o Programa de Aquisição de Alimentos - PAA. Brasília: Diário Oficial da União; 2003 [acesso 2018 nov 22]. Disponível em: http://www.planalto.gov.br/ccivil_03/LEIS/2003/L10.696.htm
 18. Brasil. Presidência da República. Decreto nº7.272, de 25 de agosto de 2010. Institui a Política Nacional de Segurança Alimentar e Nutricional – PNSAN. Brasília: Diário Oficial da União; 2010 [acesso 2018 nov 22]. Disponível em: http://www.planalto.gov.br/ccivil_03/_ato2007-2010/2010/decreto/d7272.htm
 19. Brasil. Presidência da República. Decreto nº 7.794, de 20 de agosto de 2012. Institui a Política Nacional de Agroecologia e Produção Orgânica. Brasília: Diário Oficial da União; 2012 [acesso 2018 nov 22]. Disponível em: http://www.planalto.gov.br/ccivil_03/_Ato2011-2014/2012/Decreto/D7794.htm
 20. Conselho Nacional de Desenvolvimento Rural Sustentável. Proposta de Política de Desenvolvimento do Brasil Rural – PDBR. Brasília: Condraf; 2010 [acesso 2018 nov 22]. Disponível em: http://www.mda.gov.br/sitemda/sites/sitemda/files/user_arquivos_19/PDBR%20-%20Folder_PL.pdf
 21. Conferência Nacional de Segurança Alimentar e Nutricional. Carta Política. Comida de verdade no campo e na cidade: por direitos e soberania alimentar. Brasília: Carta Política; 2015 [acesso 2018 nov 22]. Disponível em: <http://www4.planalto.gov.br/consea/comunicacao/noticias/2015/novembro/divulgada-carta-politica-da-5a-conferencia-nacional/cartapolitica5cnsan.pdf>
 22. Brasil. Câmara dos Deputados. Projeto de Lei da Câmara nº59, de 2015. Institui o Plano Nacional de Abastecimento de Hortifrutiflorigranjeiros – Planhort. Brasília; 2015 [acesso 2018 nov 22]. Disponível em: <https://www25.senado.leg.br/web/atividade/materias/-/materia/122116>
 23. Lüdke M, André MED. A pesquisa em educação: abordagens qualitativas. São Paulo: EPU; 1986.
 24. Hespanhol RAM. Programa de aquisição de alimentos: limites e potencialidades de políticas de segurança alimentar para a agricultura familiar. *Soc Nat*. 2013;25(3):469-83. <http://dx.doi.org/10.1590/S1982-45132013000300003>
 25. Altieri MA, Toledo VM. The agroecological revolution in Latin America: Rescuing nature, ensuring food sovereignty and empowering peasants. *J Peasant Stud*. 2011;38(3):587-612. <http://dx.doi.org/10.1080/03066150.2011.582947>
 26. Brito ALC, Held TMR, Botelho TR. Apontamentos acerca da política agrícola brasileira. *Rev Pitágoras*. 2013;4(4):1-15.
 27. Petersen P, Mussoi EM, Soglio FD. Institucionalización del enfoque agroecológico en Brasil: avances y desafíos. *Agroecologia*. 2013;8(2):73-9.
 28. Nicaragua. Documento final del estudio de políticas agroalimentares en Nicaragua. Nicaragua: DGPSA; 2013 [acesso 2018 feb 8]. Disponible en: <http://www.fao.org/3/a-as226s.pdf>
 29. Perini JHM. Desafio da gestão intersetorial na Política Nacional de Segurança Alimentar e Nutricional [dissertação]. Rio de Janeiro: Fundação Oswaldo Cruz; 2013.
 30. Duran AC, Diez Roux AV, Latorre MRDO, Jaime PC. Neighborhood socioeconomic characteristics and differences in the availability of healthy food stores and restaurants in São Paulo, Brazil. *Health Place*. 2013;23:39-47. <http://dx.doi.org/10.1016/j.healthplace.2013.05.001>
 31. Canella DS, Levy RB, Martins APB, Claro RM, Moubarac JC, Baraldi LG, et al. Ultra-processed food products and obesity in Brazilian households (2008-2009). *Plos One*. 2014;9(3):e92752. <http://dx.doi.org/10.1371/journal.pone.0092752>

Received: March 3, 2018
 Final version: November 5, 2018
 Approved: November 25, 2018