

1. Background: Brazil is considered an exemplary model for tackling hunger (and by extension, food insecurity) by international organizations including the Food and Agriculture Organization of the United Nations (FAO), the World Bank and the IMF. In the early 2000s and as the country had been experiencing significant economic growth for over decade, a series of social programmes were implemented across the country. These included conditional cash transfer programmes with focus on nutrition, health care, education and social assistance including Bolsa Escola (School Grant), Bolsa Alimentação (Food Grant), Cartão Alimentação (Food Card), Auxílio Gas or Vale Gas (Cooking Gas Aid). 2003 saw the launch of the Fome Zero Program (Zero Hunger Programme). Fome Zero includes interlinked initiatives and sub-programmes with the main objective of combating poverty, hunger, and food insecurity. Based on data of the 1999 National Household Sample Survey carried out by the Brazilian Institute for Geography and Statistics, the Zero Hunger Project identified the existence of 9.3 million and 44 million very poor families and people (with an income of less than one dollar a day, or about R\$ 80 a month) as of August 2001. These were seen as potential Fome Zero beneficiaries due to their vulnerability to hunger. This population accounted for 22% of all Brazilian families and 28% of Brazil's total population (Silva et al. 2011, 17). The main initiative of Fome Zero is the Programa Bolsa Família (Family Allowance) which has nowadays become the largest conditional cash transfer program in the world, covering 13.9 million families in 2015 (Rocha 2016). By way of indication, in February 2017 alone, 233766 families received the Bolsa Familia benefit in Rio de Janeiro. The number represents a coverage of 797% of the estimated poor families in the municipality (Pinto 2018, 134).

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NUTRICITIES

Contextualising food (in)security:
nutritional urgencies of the urban periphery as studied in Rio de Janeiro





2. THE FOOD INSECURITY CHALLENGE TODAY

While the implementation of the above programmes has far from solved the issue of food insecurity in the country, the programme is attributed with helping bring an estimated 36 million people out of extreme poverty. The figure stems from relevant official indicators, yet there are well-documented disputes over defining poverty. Doing so becomes even more difficult in urban informality environments as articulated, for example, in the favelas: poverty here cannot be determined solely in terms of absolute income, but has to include parameters including public infrastructure and overall housing and living conditions (Pinto 2018).

Constantly rising food prices drastically affect people's purchasing power and their potential for access to nutritional food (Souza et al. 2015). Food insecurity refers to the lack of secure access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life (Food Security Information Network 2018, 11). Food insecurity is therefore not only related to the question of the physical lack of food. In the majority of cases –and in cities in particular– sub-nutrition and malnutrition are associated, among others, with the poorest populations' insufficient purchasing power to buy safe and nutritious food

(Willaarts et al. 2013, 2). The challenge is only bound to escalate in the future, as food item prices are projected to increase further (Kimberly 2018).

Recent years have seen a near-permanent “global food crisis” (Souza et al. 2015, 4, 11, 20) caused by factors including food price shocks (e.g. in 2008 and 2011) and the near-steady upward trend of the prices of food commodities. In this context, the question of food access and by extension malnutrition is becoming more complex, as it is now directly related to market mechanisms and their fluctuations (ibid.). Despite Brazil’s enormous

potential for food production, the relevant policies have proved insufficient to solve the food deprivation problem.

They have been unable to provide, or at least facilitate sufficient purchasing power for the poorest to secure nutritional food. The increasing volatility in food prices and food inflation have a decisive impact on tackling food insecurity for the poorest sections of the population, erode potential gains in their income along the way.

The food insecurity question has particular characteristics in the urban context. First, we



3. FOOD INSECURITY IN THE URBAN CONTEXT

know that economic, demographic and spatial transformations have a decisive impact on shifts in food consumption patterns (Willaarts et al. 2013). In the case of Brazil –and in light of the rapid urbanisation that took place in the second half of the 20th century in particular– this is reflected (a) in the reduction of food consumption per capita in absolute terms and (b) in the significant changes in the diet composition, as articulated in the changes in the composition of the food pyramid (Ibid.). Official data indicates that malnutrition is nowadays concentrated in rural areas of the capitalist periphery. Yet during periods of food crises, the urban poor are particularly vulnerable against increasing food inflation, as they

do not produce food and “they cannot cope with food price volatility and supply in the same way as rural populations” (IHC Global). Malnutrition in cities is largely a consequence of household dependence on ever-rising food prices and unstable cash income. In addition, the impact of the urban lifestyle on eating habits (including for example sedentary lifestyles and reduced physical activity, overloaded schedules and increasing consumption of ready meals and fast food) renders access to sufficient and nutritional foods even more crucial, but difficult.

In the overall picture of food insecurity one has to add the changes caused by the increasing



4. FOOD INSECURITY IN THE CONTEXT OF FOOD HOMOGENEITY, AGROTOXINS AND GMOS

homogeneity of world food supplies, which has an impact both on production and consumption levels. The so-called “Westernization” of diets globally, namely the “transition in preference of energy-dense foods (i.e. animal products, plant oils, and sugars) over cereals, pulses, and vegetables” (Khoury et al. 2014, 4001) is based upon a limited number of global crop commodities and processed products. This dietary Westernisation rapidly transforms the global and local agriculture alike. In addition to transformations in agricultural systems, this transition is also strongly reflected in food habits.

The growing reliance on a small variety of food crops is related to the rapid spread of a food culture based on processed and energy-dense foods, reaching out to rural and urban peripheries, and contributing in turn to a new epidemic of various non-communicable diseases including diabetes, heart disease and certain forms of cancer (ibid.; Jacobs and Richtel 2017). Specifically in Brazil, the powerful food industry, which enjoys close links to the country’s political system (Jacobs and Richtel 2017), has over the last decade imposed a “junk food” culture based on high-calories, nutrient-poor food. These dynamics have led to types of malnutrition, rendering access to balanced diets more difficult despite the fact that families have higher incomes through the government programs. This indicates that malnutrition is neither necessarily nor exclusively the outcome of a lack of purchase power, depending instead on the kind of food locally accessible to people. The results are now visible across the country: Poor diets of people in rural and urban peripheries contribute to high incidences of non-communicable diseases such as cardiovascular

disease and Type II Diabetes (ibid.).

Another important factor comes into play when it comes to access to healthy food in Brazil: the country is the world’s top user of agrottoxins (See Campanha Permanente Contra os Agrotóxicos e Pela Vida). In absolute numbers, the agroindustry in Brazil applies more agrottoxins than any other country in the world, and also many small farmers make common and frequent use of agrottoxins in their plantations. While in the year 2000 the total amount of agrottoxins sold in Brazil added up to just less than 314 million tons of commercialized product, this amount nearly tripled until 2013, reaching a peak of 902409 tons maintaining this high level in 2014 and 2015 with values hovering around the 900.000 ton mark (ibid.).

Besides the use of agrottoxins, the use of Genetically Modified Organisms (GMO) has also increased significantly over the past two decades. According to data gathered by the Permanent Campaign Against the Use of Agrottoxins, in 2003 the total land area with GMO crops added up to three million hectares across all of Brazil. Only twelve years later, in 2015 GMO’s were planted in more than 14 times this area, totaling 44,2 million hectares (ibid.). The continuous decrease in crop diversity and increase in both planted GMO crops and used agrottoxins has meant it is now increasingly difficult for populations to get access to non agrottoxin-based, quality food - and those living in the urban peripheries are disproportionately affected since alternative organic production is mainly aimed at middle and upper income neighbourhoods. In this context, food security as a concept has been critically reformulated by social movements of the



5. FOOD SOVEREIGNTY AS RESPONSE TO THE FOOD INSECURITY CHALLENGE?

Global South. For example, through the example set by the international peasants' movement Via Campesina, actors that mobilise in the food production sector now list food sovereignty as the objective of their social and political struggles. In this context, an agroecological approach to food production has gained great importance: be it small farmers in rural or periurban areas or urban farmers, the agroecological movement has gained strength across the board over the past few years. Within the recent political crisis in Brazil and despite the shift of the current government's interest in near-exclusively supporting the interests of agroindustry, the agroecological movement deserves particular attention: communitarian solutions to the crisis of access to healthy food,

especially in the urban peripheries, will find through this movement many experiences and possible solutions through highly adaptable, local, small scale and non-industrialised forms of agroecological food production.

Our research will rely on the knowledge of, and the interaction with local communities in Rio de Janeiro's urban peripheries to answer a key question: what kind of role can agroecology play in dealing with the food crisis? We approach this question from an urban periphery perspective. And we understand agroecology as a set of techniques, as a movement and a shift away from conventional and unsustainable conventional and industrialised food production. A move that is both possible and necessary.

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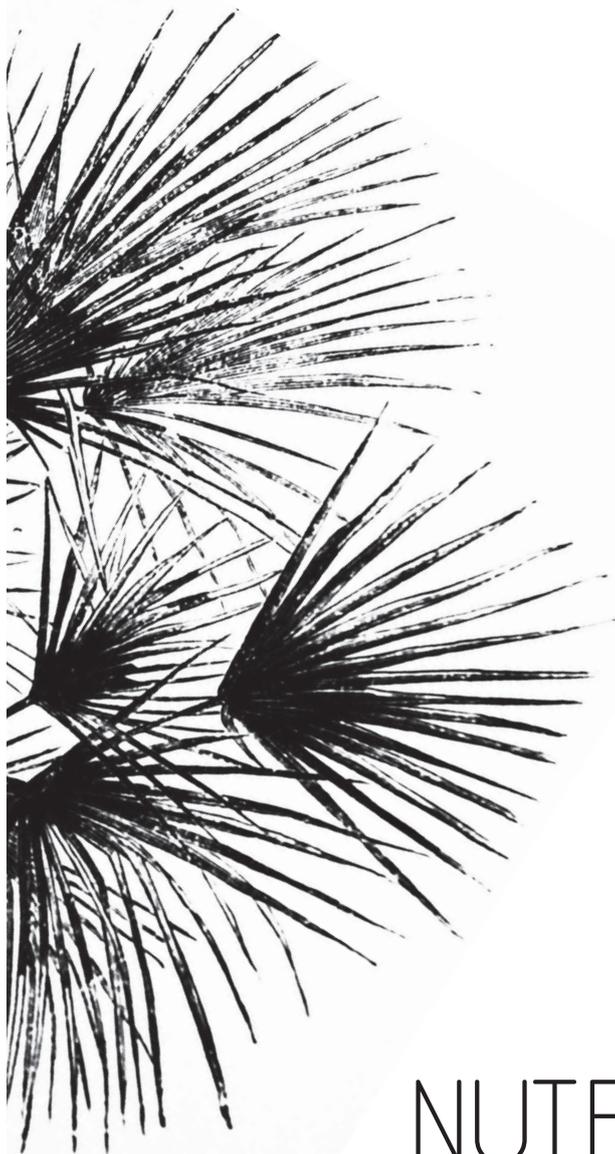
IMAGES

Page 1: Diversity of spices, all agroecologically grown, at Josué de Castro market.

Page 2: Monthly meeting of the Articulation of Agroecology of Rio de Janeiro (AARJ) at the base of the Cooperative of Small Farmers of the Magé municipality. On the ground banners of different groups and movements that integrate the articulation such as the Carioca Network of Urban Agriculture.

Page 3 and 4: The Small Farmer's Movement (MPA) manages a hostel and a restaurant in the culturally diverse and tourist attracting neighbourhood of Santa Teresa. At the venue, products from the movement's farmers are sold. Every Saturday the house opens for a "farmer's breakfast" with a buffet of house-made farmer's food, mostly agroecologically produced. At the same time fresh food is sold at a little market stand (4) and processed food items are regularly available at the small store (3).

Page 5: Getting ready to work: Nutricities local community research collective "Minhocas Urbanas" on a weekend long visit to the agroecological farm of small farmer and community researcher Dona Juliana. Practical experience of how to compost organic material, a practice that could and should be more and more disseminated also in the favelas, which is why the collective wants to learn the technique.



REFERENCES

- Campanha Permanente Contra os Agrotóxicos e Pela Vida. *Dados Sobre Agrotóxicos*. Retrieved from <http://contraosagrototoxicos.org/dados-sobre-agrototoxicos/>.
- Food Security Information Network (2018). *Global Report on Food Crises 2018*. Retrieved from <https://www.wfp.org/content/global-report-food-crises-2018>.
- IHC Global. *Urban Food Insecurity*. Retrieved from <https://ihcglobal.org/key-policy-topics/urban-food-security/>.
- Jacobs, Andrew and Matt Richtel (2017, September 16). How Big Business Got Brazil Hooked on Junk Food. *New York Times*. Retrieved from <https://www.nytimes.com/interactive/2017/09/16/health/brazil-obesity-nestle.html>.
- Kimberly, Amadeo (2018, March 19). Why Food Prices Are Rising, the Trends and 2018 Forecast. *The Balance*. Retrieved from <https://www.thebalance.com/why-are-food-prices-rising-causes-of-food-price-inflation3306099>.
- Khoury, Colin K., Anne D. Bjorkman, Hannes Dempewolf, Julian Ramirez-Villegas, Luigi Guarino, Andy Jarvis, Loren H. Rieseberg, and Paul C. Struik, (2014). Increasing homogeneity in global food supplies and the implications for food security, *PNAS* 111(11), 4001-4006. Retrieved from http://www.pnas.org/content/111/11/4001?xid=PS_smithsonian.
- Pinto, Michele de Lavra, (2018). Meanings of Poverty: An Ethnography of Bolsa Familia Beneficiaries in Rio de Janeiro/Brazil. In Margit Ystanes and Iselin Åsedotter Strønen (Eds.) *The Social Life of Economic Inequalities in Contemporary Latin America: Decades of Change* (pp. 129-150). Palgrave Macmillan.
- Rocha, Cecilia, (2016, August 4). Advancing Food and Nutrition Security in Brazil. *World Cancer Research Fund International*. Retrieved from <http://www.wcrf.org/int/blog/articles/2016/08/advancing-food-and-nutrition-security-brazil>.
- Silva, José Graziano da, Mauro Eduardo Del Grossi, and Caio Galvão de França (eds.), (2011). *The Fome Zero (Zero Hunger) Program: The Brazilian Experience*, Brasília: Ministry of Agrarian Development.
- Souza, Sabrina de Cássia Mariano de, Niemeyer Almeida Filho, and Henrique Dantas Neder, (2015). Food Security in Brazil: An Analysis of the Effects of the Bolsa Família Programme. *Review of Agrarian Studies*, 5(2), 132.
- Willaarts Bárbara A., Ignacio Pardo, and Gabriela de La Mora (2013). *Urbanization, Socio-Economic Changes and Population Growth in Brazil: Dietary Shifts and Environmental Implications*. XXVII IUSSP International Population Conference, 2631 August, Busan, South Korea.

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