The Human Scale In Urban Agricultural Policies: A Methodological Contribution

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Abstract

The components of the human scale in urban agriculture policies are investigated in order to contribute to the elaboration of a methodological proposal that demonstrates the role of urban and peri-urban farmers in the supply of vegetables to the Metropolitan Region of Natal, while emphasizing the importance of these social actors and their activity for the purpose of understanding the city as a heterogeneous, multiple, open and relational space, also as an environment that produces life and healthy food.

Keywords

Urban Agriculture; Public Policy; Human Space

Introduction

Introduction

The practice of Urban and Peri-urban Agriculture is an embodiment of paradoxes, both in Brazil as well as in the Metropolitan Region of Natal. In this region, while there is an increasing participation of urban agriculture in the dynamics of supplying fresh food to different markets such as free markets, supermarkets and hotels, in the political and ideological context, both these social actors and their activity and effective participation in supplying healthy food to the urban space are invisible.

This invisibility is evident in the fact that the family based urban and peri-urban agriculture is not reached by the official federal agencies responsible for the collection of census data such as the Brazilian Institute of Geography and Statistics (IBGE) or state and municipal bodies responsible by the agricultural extension policy. This paradox implies that farmers cannot benefit from specific public support to family agriculture and agricultural production occurs in the context of the trilogy: land, labor, and family, which is the basis for its structural support. The combination of these absences places urban and peri-urban farmers in an asymmetrical position in the power relations with the public bodies responsible for land use and management, policy makers responsible for policies to stimulate horticultural production, as well as in relation to real estate agents with speculative interests in the conversion from agricultural to residential land use. This makes the practice of urban and peri-urban agriculture a complex activity, since while it contributes to supplying the urban food market, it diverges from the interests of agents of capital who reproduce themselves through the unequal appreciation and appropriation of the city and of the territorial space (Carlos, 1992; Santos, 1985 and 1977; Santos and Locatel, 2017), thus conflicting with the urban and peri-urban farmers who conceive it as a space for (re)production of life (Santos, 1985 and 1977; Santos, 2012; Santos and Badiru, 2017).

This research contributes to showcase the practice of urban and peri-urban agriculture in the metropolitan region of Natal (Santos and Locatel, 2017), evidencing the existence of social subjects who reproduce socially as a result of the accomplishment of this activity with their family in the territory understood as a space of identity and life. At the same time, pointing to the relevance of this activity and of these subjects to benefit from the public policies inherent to family agriculture such as the Food Acquisition Program (PAA) and the National School Supply Program (PNAE) and to be recognized as space modelling agents that fulfill an important role supplying food and vegetables to the local and regional market.

The human scale of the research (Santos, 2012) has as its starting point the material basis of the existence and experience of urban and peri-urban farmers, that is, the neighborhood, the stage of production and reproduction of life, the scale of everyday life with its clashes, challenges, impulses and passions. Assuming that space is open, multiple, relational (Massey, 2008; Steinberger, 2006) and dynamic as reality itself.

Methods

The Metropolitan Region of Natal is a heterogeneous territory. The 14 municipalities (Figure 1), sum up an area of 3,555,771 km², and a population, in 2016, totaling 1,555,072 inhabitants (IBGE, 2016). The Municipalities of Natal (state capital) and Parnamirim account for 71.42% of the total population.

For the identification of urban and peri-urban areas, sector census data were used, which allows to identify the areas of agricultural production. This data allows the identification of the priority areas for the analysis of the agricultural use in urban and peri-urban areas. Based on this identification, the areas used for agricultural and livestock production were vectorized from satellite images. The areas where the surveys were carried out were defined based on the use of IBGE micro data and spatial statistics, which enabled them to be delimited and mapped. Questionnaires were then undertaken in order to characterize the farmers and their families, the productive activities carried out, the market destiny of production, access to public policies and the composition of family income.

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The families interviewed had a total area of 62.8 hectares, but the size varies considerably, from 100 m in the city of Natal, to 10ha in Nísia Forest, the most extensive unit used for cattle breeding (Table 1).

<table>
<thead>
<tr>
<th>MUNICIPALITIES</th>
<th>SIZE CLASSES</th>
<th>TOTAL</th>
<th>WITHOUT INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100 A 5,000</td>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td>Nísia Floresta</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>São Gonçalo</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Macaíba</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Extremoz</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Natal</td>
<td>4</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Parnamirim</td>
<td>1</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total absolute</strong></td>
<td>11</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total relativo</strong></td>
<td>25.6</td>
<td>20.9</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Table 1. Size of the properties interviewed, by size classes in the Municipalities of the Metropolitan Region of Natal.

The age groups 36 to 45 years and 46 to 55 years represent the highest percentage of respondents (Table 2). Regarding the time of practice of the agricultural activity, 47.7% did so for more than 20 years, 11.4% between 11 and 20 years, 18.2% between 6 and 10 years and the remaining 22.8% until 5 years.

<table>
<thead>
<tr>
<th>GENDER</th>
<th>BY YEARS</th>
<th>16 to 18</th>
<th>19 to 25</th>
<th>26 to 35</th>
<th>36 to 45</th>
<th>46 to 55</th>
<th>56 to 65</th>
<th>65 AND PLUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>79</td>
<td>2.9</td>
<td>5.9</td>
<td>14.7</td>
<td>20.6</td>
<td>23.5</td>
<td>14.7</td>
<td>17.5</td>
</tr>
<tr>
<td>Female</td>
<td>21</td>
<td>0.0</td>
<td>11.1</td>
<td>0.0</td>
<td>33.3</td>
<td>33.3</td>
<td>11.1</td>
<td>11.1</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>2.3</td>
<td>7.0</td>
<td>11.6</td>
<td>23.3</td>
<td>25.6</td>
<td>14.0</td>
<td>16.3</td>
</tr>
</tbody>
</table>

Table 2. Brief characterization of urban and peri-urban farmers surveyed

The majority of the work is done by the owner and his family (in 81.4% of the cases), while 18.6%, corresponding to 8 properties, use also paid work, in a total of 32 permanent paid workers. The use of paid work is related to the larger size of the property. In Natal, for example, two cases were identified in which each enterprise hired 8 and 12 permanent employees. In addition, there is also temporary hiring of paid work. Among the interviewees, 23 farmers (53.5%) hire temporary workers, employing a total of 44 people. There have been isolated but alarming cases of non-compliance with labor legislation.

In total, between family members and paid workers 166 people are directly involved with horticulture activities and rely on land and agricultural practices to live and reproduce socially.

In 90.7% of cases, horticulture is the main activity, while livestock, hydroponics and agroforestry correspond to the remaining 9.3%. The productive activities are distributed between vegetal production and animal production. In the vegetable production, the leaf/flower vegetables (Figure 2) are the main source of income and the main one responsible for the social reproduction strategies of the family; followed by fruit vegetables.

Figure 02: Agricultural practices in the research area

Root vegetables and tubers contribute sporadically to the composition of family income, as well as fruits harvested according to each season of the year. Animals integrate the reproductive strategies of the family farmers in two distinct bases: for those who have horticulture as their main source of income, the cattle raising appears as an alternative of income, but, mainly, as part of the family consumption. For those who live on cattle raising, this is their main source of income, whether or not combined with horticulture, depending on the physical area available, the predisposition of the farmer and the on the availability of family or paid labor.
The planting techniques are the hanging gardens or directly on the ground. The garden in the ground, despite being the most common, it is also the one more susceptible to climate and weather adverse conditions and to and insect pests. The majority of the work is hand work using traditional tools and only 18.6% of the interviewees use the tractor or mini tractor. They use compost and chicken manure to fertilize the soil.

Regarding the destination of production surpluses after self-consumption, 20 different destinations were identified for the products of Urban and peri-urban Agriculture in the Metropolitan Region of Natal, with direct sales in free markets (58.1% of the cases) being the most important, also because they are the most dynamic and diversified markets. In 39.5% of cases, they use intermediaries while 32.5% sell their production on the spot, 18.6% sell to supermarket chains and an equal value places their production in neighborhood groceries.

As for financing, some gardeners make use of the credit lines made available by the BNB (Brazil’s Banco do Nordeste), to assist in the cost of production, however, this option is used only by few of them and the impacts on production are shy. For the majority, the horticultural activity, in the researched area, is the result of the family investment, from both the financial and the labor points of view.

Discussion

Although the practice of urban and peri-urban agriculture in the area of research is consolidated, professional training, volume and range of production and the network of socio-territorial and commercial relations, are still not sufficient for it to benefit from public policies aimed at family agriculture. The National Family Agriculture Program (PRONAF), was created on August 24, 1995, “intended for financial support to agricultural activities developed through direct employment of the labor force of the farmer and his family” (MDA/SEAD, 2017). However, among those surveyed, only 16.2% already benefited from this policy, while 83.8% did not.

Regarding institutional markets, the Ministry of Agriculture, Livestock and Food Supply (MAPA) reports that the Food Acquisition Program (PAA) was instituted in July 2003 as a support to family agriculture by buying preferably from them agricultural products that are intended for distribution to people in a situation of food insecurity and to the formation of strategic stocks. Despite its importance, only 11.6% of respondents reported knowing the existence of this policy, out of which only 4.65% have benefited from it.

The National School Supply Program (PNAE) was created by the Ministry of Education (MEC) on March 31, 1955, under the School Lunch Campaign (CME). In 2009, the Program was extended to the entire public basic education network, also including the Youth and Adult Education Programs. It requires that at least 30% of the funds from the National Education Development Fund (FNDE) will be used in the acquisition of food products from family agriculture. However, in the same sense of the two previous cases, the PNAE is known by 20.9% of the interviewees, and only 2.32% benefited from it. Although some respondents said that they would like to benefit from public policies oriented to strengthen family agriculture, they report that they depend on their membership in Rural Workers’ Unions. This requirement creates an administrative barrier, since the Unions cannot approve their registration because they live in areas considered 100% urban, which in the Brazilian conception means the absence of agricultural practices. Thus, urban and peri-urban farmers are excluded from PRONAF policies, since they do not yet consider the existence of agricultural activity in urban space, despite its importance to supply fresh food in the area under study.

In 2012, the Public Prosecutor’s Office signed a partnership with the Association of Residents and Friends of the Gramoré Site and Adjacencies (AMIGs), EMATER, SEBRAE and Petrobrás to create the Amigo Verde Gramorezinho Project with two major aims: to contribute to reduce agricultural environmental impacts and to enlarge the number of farmers who could benefit from these public policies. So, on one hand, the initiative aimed to emphasize the socio-environmental issue, since the area in spite being the main center for vegetables supply to Natal, used by more than 120 agricultural properties, is part of the Natal Master Plan as the Environmental Protection Area -9 (ZPA-9) and is part of the River Doce Hydrographic Basin, one of the tributaries of the Extremoz Lagoon, that supplies water to the city of Natal (Anjos, 2009). On the other hand, the project aimed to disseminate knowledge on agro-ecological practices required to obtain the organic production declaration issued by the Ministry of Agriculture, in accordance with Federal Law 10.831/03, which is necessary to access the institutional market and some public policies. Some of the interviewees joined the project, made the transition to agro-ecological and began to produce according to the law. However, after issuing the declaration to the first 20 farmers, EMATER stopped providing technical assistance. Without this monitoring, financial and bureaucratic difficulties limit obtaining certification by the Ministry of Agriculture. This situation left the farmers unsatisfied because those who got the certification are taking advantage of programs such as PAA, PNAE, and participate in organic fairs promoted by the Public Ministry, while all others are excluded.

Conclusion

Urban and Peri-urban Agriculture (AUP) is considered a multidimensional concept (Santandrea and Lovo, 2007; Mougeot, 2000), which manifests itself in the reality of the area where field research took place. Although the farmers interviewed feel that they contribute to the dynamics of the fresh food market, they find that administrative barriers place them outside the scope of PRONAF and institutional
markets (PAA and PNAE), which, although having a national scope, are directed to agricultural activity carried out in rural areas. The agricultural activity carried out is understood as a profession and a strategy of social reproduction of urban and peri-urban farmers for the consolidation of their existential and living space (Santos, 2012; Santos and Badiru, 2017; Santos and Locatel, 2017).

Farmers reported different experiences in their relationship with public policies aimed at strengthen family agriculture, in part because they have been punctual and selective, as was observed in relation to Amigo Verde Gramorazinho Project that was interrupted leaving farmers from the same region in unequal situations.

Urban space should be assumed as a multifunctional space where agricultural activity might also be carried out, thus allowing urban and peri-urban farmers to benefit from policies oriented towards strengthen family farming, which are currently restricted to rural areas in Brazil. There is hope that the new Law of Urban and Peri-urban Agriculture (Ordinance No. 467 of February 7, 2018 / MDS), will finally create the conditions for the development of this activity.

References


