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Knowledge of the urban population of Botucatu-SP on agroecology and organic food production

N. P. Ribeiro, R. A. Pelvine, F. G. S. Garreto, L. R. Ribeiro, R. M. Silva

Author for correspondence: nathaliaribeiro15@hotmail.com

Abstract: Currently the world population seeks a healthy and sustainable source of food, with the intention of a good life quality. Given this situation, organic production with an agroecological approach is a way to provide healthier food to the community. The purpose of this study was to evaluate the knowledge of the population of Botucatu-SP on agroecology and organic food production. The methodology was based on the application of questionnaires to 93 adult people. The results analysis consisted of the responses percentage and data qualitative description. The results showed that 47.3% of the interviewees know what agroecology is. Regarding the knowledge on organic products, 96.7% of the respondents said they know, and 61.5% consume them. The high price (61.5%) is the main factor that decreases the consumption of these products according to the community. Regarding organic food marketing sites, 84.7% of the interviewees know at least one sale point in the city. Results demonstrate that the Botucatu population has little knowledge on agroecology, however, when questioned about the organic production they know how to opine. This fact may be related to several producers, marketing points, some certifiers, as well as projects of university extension that deal with organic production in the city.

Keywords: Family farming, Healthy Eating, Increase in income, Sustainability

Introduction

Recently, most of the significant changes that have occurred in the agri-food sector happened due to the increased consumer concern about food safety and the environment (Barbosa et al., 2011).

The present model of hegemonic agricultural production presents clear signs of collapse, due to the environmental, economic and social impacts it causes, what is a result of the reductionist and mechanical view it adopts. The high dependence on external inputs of the current agricultural model leads us to think about solutions that make the production units more independent and, consequently, sustainable. Hence, agroecology is a viable alternative to the agriculture of the future (Barreira, 2011; Almeida et al., 2003).

The concept of agroecology includes methodologies, which incorporate environmental and social ideas, to analyze agroecosystems. According to Altieri (1998), it is a new approach that integrates agronomic, ecological and socioeconomic principles to understand and evaluate the effect of technologies on agricultural systems and society as a whole.

Currently, the world population seeks a healthy and sustainable food, with the intention of a good life quality in the future. Thus, agroecological

systems are characterized as an interesting instrument, since the low dependence on external input contributes to the maintenance and/or recovery of the biodiversity of agroecosystems and the environment, while at the same time increasing family income adding value to products and expanding the market (Gliessmann, 2000; Monteiro et al., 2004).

In relation to the Brazilian production, the municipality of Botucatu-SP has certain peculiarities regarding the production and consumption of organic products. The city is a reference in the dissemination of organic agriculture, either by the foundation of the Estância Demétria, which works with principles of biodynamic agriculture, or by the creation of the Biodynamic Institute (IBD) in 1984, one of the largest certifiers of the country, whose seal has international acceptance (Perosa et al., 2009).

The movements in the neighborhood Demétria started with the work of biodynamic producers, which began in the Estância Demétria in 1974. Today there are several options to stimulate the consumption of organic products through restaurants, schools, associations, fairs, and other attractions. The particularities of Botucatu in the coexistence with the movements related to

biodynamic and organic agriculture also result in a more specialized product distribution system, reserving sites directed to disseminate and strengthen the consumption of these products (Perosa et al., 2009).

The products found in the region range from vegetables, bakery products, cosmetics, and processed food, presenting a great diversity. The amount produced, the product standard and the production planning are factors that have interfered in the opening and maintenance of the marketing channels (Arnaldi et al., 2004).

Hence, it is in this context that this study is developed, aiming to evaluate the knowledge of the population of Botucatu – SP on agroecology and organic food production in the municipality.

Methods

The research method used for this study was quantitative with an exploratory research type, adopting a non-probabilistic sample. Therefore, the inferences extracted from the sample were excluded, due to the limitations of this type of approach (Vergara, 1998).

The research was carried out in the central region the city of Botucatu, São Paulo, in order to question the population of the municipality about their knowledge on agroecology and organic food production. To do so, a structured questionnaire, composed of ten questions, was applied randomly to 93 people of both sexes and aged between 18 and 75 years, who passed through the commercial center of the city.

The central area was chosen to cover several consumer profiles, in addition to the fact that there are weekly organic product fairs near the place. The data were submitted to descriptive analysis and are presented in percentage (%).

Results and discussion

The age of the interviewees varied, with the greater representativeness of the group aged from 21 to 30 years (26.89%). In relation to the city in which they live, 97.6% of respondents reside in Botucatu, and the rest have their residence distributed in neighboring cities and more distant such as Cuiabá – MT, and Campinas – SP.

47.3% of the respondents stated that they had some knowledge about agroecology, while 52.7% of those interviewed did not know or had never heard about it.

Part of the interviewees showed interest in knowing more about agroecological bases, resulting in 82.4% of stakeholders. Based on the context, it is necessary that the public administration promote the agroecological practices to the community. It is known that agroecology stimulates the environmental education of the population, benefiting the socio-cultural formation and inducing them to look for a better life quality, what provides personal and environmental welfare, and ensures

food and nutritional security of their families and future generations (Ritter & Gricoletto, 2013)

Regarding the people's view on the added value of agroecological production in the income of family farmers, 49.5% of the respondents stated that they believe that this management of differentiated production generates significant profits to the producer. A great part of the respondents reports that due to the sustainability of the agroecological system, the food derived from this management may present greater market value. However, due to the unfamiliarity of the term agroecology, 50% of the people interviewed did not know how to comment on the issue.

Based on the context of sustainable food production, the questionnaire was also intended to evaluate the consumption of organic products. It is important to say that the term organic refers to food of animal and vegetable origin produced without the use of high solubility synthetic fertilizers, agrochemicals, growth regulators, anti-parasitic agents, transgenic or any other product that has residues considered harmful to the human health (Instituto Biodinâmico, 2018).

When questioned about organic foods, 96.7% of the respondents said they know this type of product, while only 61.5% of respondents consume them. The high percentage of knowledge and consumption is due to the fact that the municipality of Botucatu has certain peculiarities regarding the production and consumption of organic products, such as associations and fairs for this purpose. People who claim to consume organic products report that they consume them because of these foods' superior quality, less use of pesticides and especially the benefits they provide to health.

Currently, the benefits organic food brings to human health is already reported by some research centers. According to Barański et al. (2014), there are significant differences between the levels of certain antioxidants, such as polyphenols, present in the common foods and organics, ranging from 19 to 69%. This fact is due to the plant's ability to produce antioxidants when they fight against pest attack, thus presenting higher levels of these substances because they are not protected by pesticides. In humans, antioxidants protect the body's cells from damage by free radicals, slowing aging and preventing degenerative diseases, such as cancer.

According to the interviewees, the high price (61.5%), supply irregularity (13.2), insufficient quantity (5.5%), lack of variety (13.2%) and poor product quality (6.6%) are among the main factors that hinder the consumption of these products. It is interesting to note that even though they consider the prices of organic products to be high, the population still consuming them. In Botucatu, the Department of Agriculture of the city promotes discussion with the entities to strengthen the work of organic producers and to improve the dissemination of these products in Botucatu and region (Pessoa, 2007).

This intense marketing and the creation of new projects to improve the organic production chain in the municipality can explain the high knowledge of the population in at least one organic food commercialization site; 84.7% of the interviewees know at least one point of sale in the city and 51.4% of respondents said that these sites are easily accessible. The neighborhood Demétria, the community gardens, the organic fair in the cultural space and the supermarket Pão-de-Açúcar are among the main sites mentioned.

Conclusions

This research shows that the population of Botucatu-SP does not know much about the term agroecology, however, they know organic food. Regarding organic products, the price is the main factor that hinders the increase of these products consumption.

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