Profile and Behavior of Organic Products Consumer in Brazil

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Abstract— Organic agriculture simply way can be understood as a model of food production management that reconciles good environmental practices in farming, aiming at maintaining a high level of biodiversity, preserving natural resources in order to obtain healthy food without residual chemicals. In this context, demanding for quality of life, a large number of consumers are modifying their consumption habits by inserting organic foods into their daily lives. However, there are few studies that reveal the profile and behavior of organic products consumer and in particular which factors may favor the expansion of the consumption of this type of food. Thus, in order to answer these gaps in the retail market, a descriptive exploratory survey was conducted from June to August 2017 with 138 consumers, at the time they made the purchase of organic products. The study showed that the consumption of organic products in the sampling performed presented similar levels between the genders, as well as did not show variation in the consumption in relation to the age group. The organic products most preferred by consumers were tomatoes, potatoes and lettuce. The factors that limited consumption were the price that was classified as high, the difficulty of easily finding the desired product and the lack of promotions. The study also revealed that the factors that influenced the consumer behavior of organic products were the level of education, as they advanced in education, the consumption also advanced, as well as the consumer behavior of the family arrangement, and it was observed that as the number of people and economic income increased, the consumption of these products also increased. The adoption strategies shared between the retail trade that involve the adjustment of prices of organic products to the reality of consumers, the purchase of local production as a way of price reducing, and educational marketing campaigns can favor the commerce of organic products in the classes of lower purchasing power.

Keywords—Organic agriculture, Organic products trade, Consumer, Marketing, Paraná Coast.

I. INTRODUCTION

Organic agriculture is a global system of agricultural management and food production combining the best environmental practices, a high degree of biodiversity, preservation of natural resources, application of high standards for the animal well being and a production method that respects the preferences of certain consumers for products obtained through natural substances and processes, with the objective of obtaining healthier and more nutritious foods without chemicals that deteriorate the soil (RAMESH; SINGH; RAO, 2005; MAZZOLENI, OLIVEIRA, 2010; MORAES et al. 2015).

The organic agriculture in the last decades shows an average growth of 20% per year in Brazil, both in production and in trade, it moved values close to R$ 2 billion per year. This growth has been driven by the demand of the Brazilian population for food that results in better health conditions (SILVA; SOUSA, 2013; MAPA, 2015).

The organic consumers are identified as a different marketing segment from the consumers of conventional products, because this group of consumers considers the forms of production, the benefits derived from this production and the origin certification of the product consumed (CRUVINEL et al., 2017; STEFANO, 2013; ETINGOFF, 2017).

Despite the constant increase in trade of organic products, when compared to other countries, the Brazilian consumption is still low, and has potential for growth. Among the factors that can help the growth of consumption and consequently the organic products trade,
it can be mentioned marketing strategies based on the marketing mix (MORAES et al., 2015, ANACLETO et al., 2017).

Marketing is a process designed to identify and satisfy customers’ needs and desires through the creation of appropriate products and services that, through forms of exchange, generate value and satisfaction for the parties involved (KOTLER; KELLER, 2012). The marketing mix also referred to “4 Ps” is described by Kotler (2009), as being the set of factors that can define the success or failure of the insertion of a product in the market, and it is referred to four macro factors: product, price, place and promotion.

The marketing mix can be defined as a set of tools, actions and decisions that an entrepreneur will adopt for a product to reach the intended audience more easily (KOTLER; KELLER, 2012).

The correct diagnosis of the marketing mix allows the entrepreneur to analyze each one of the elements that influence the company’s sales strategy (product, price, place and promotion) and obtain a concrete action plan to be implemented in order to achieve the objectives of the organization (COBRA, 2015). In addition, the market-based assumptions of the marketing mix represent a valuable tool for consumer performance and it is perfectly applicable to the organic trade sector (KOTLER, 2009; TERRAZZAN; VALARINI, 2009; MORAES et al., 2015).

The consumer behavior is a relevant factor in business processes, understanding consumer attitudes and behavior as well as the factors that can influence purchasing behavior reflects opportunities to meet the desires and needs of the customers, and in this context it is urgent the realization of studies that seek the understanding of what the consumer of organic products wants (COBRA, 2015).

Paraná Coast is a region that has the favorable conditions for organic agriculture, but despite the growth of activity in field, and the region has a population of more than 250 thousand inhabitants, practically all the production is carried to other cities, especially Curitiba, the largest city in the State and with the largest number of consumers and in this context, there are no researches that denote the reasons for this occurrence.

Thus, in fact that there is little research on the analysis of consumer behavior of organic food in Brazil (TERRAZZAN; VALARINI, 2009), and still on a smaller scale in Paraná Coast (ANACLETO et al., 2017), the present study aimed to identify the profile and behavior of organic vegetable consumers in Paraná Coast, specifically responding to the following questions:

- What was the socioeconomic profile of the organic products consumer in Paraná Coast?
- What were the most preferred organic products to buy?
- What were the levels of consumer satisfaction in relation to organic products?
- What were the factors that influenced the consumer behavior of organic products?

II. MATERIAL AND METHODS

The present study was performed according to what was proposed by Anacleto et al. (2017) being classified as exploratory-descriptive research, and it obeyed the following steps.

Initially semi-structured interviews were carried out from June to August of 2017 with consumers of organic products in the almost all cities of Paraná Coast, namely: Paranaçu, Matinhos, Guaratuba, Morretes and Antonina.

The region was chosen because according to Anacleto et al. (2017) the regional population is more than 250,000 inhabitants and the average per capita income is R$ 765.85 and the region receives annually around two million vacationers who remain in the region for more than two months, in addition to these, the polo city of the region currently has the seventh largest financial collection in the State, and it is classified as a mediumsized city, and this region shows per capita conditions similar to other 160 cities in Brazil.

The sample was 138 consumers and met the marketing research and consumer profile guidelines when the population was unknown (MALHOTRA, 2010) and it was carried out when the consumer was in the retail establishments which commercialized organic products.

In order to identify the consumers’ profile, information on gender, marital status and education was collected as proposed by Malhotra (2010).

The age classification was performed as adopted by IBGE (2015), and the for the income classification it was used the Brazilian Economic Classification Criterion, as proposed by ABEP (2013) and endorsed by Anacleto et al. (2017).

The consumption behavior was established from data on frequency, motivation and preferential purchase products (MALHOTRA, 2010; ANACLETO et al., 2017).

The non-parametric Mann-Whitney and Kruskal-Wallis tests were used to evaluate the correlations between the consumer profile and behavior, followed by the average multiple comparison test of Dunn, at a significance level of 5% (p < 0.05).

The existence of correlation between the consumption and the analyzed variables (age, gender, income and school education) was investigated using Spearman’s correlation coefficient (HAIR et al., 2009).
The normality of the data, according to one proposed by Hair et al. (2009) was analyzed by the Kolmogorov-Smirnov test, and the test results (p <0.05) led to the decision to use non-parametric tests.

The marketing mix (price, place, promotion and product) was evaluated considering the level of consumer satisfaction with the offer of the region. The respondents were questioned about the preferred purchase places, as well as three potential factors that make buying difficult and which would lead them to buy more organic products, ranking them hierarchically (1 to 3).

In order to evaluate the level of consumer satisfaction of organic products, it was adopted the Kano Model of attractive and obligatory quality (KANO, 1984).

According to Anacleto et al. (2017), this model identifies which attributes the customer classifies as mandatory and prerequisite for consumption. It also classifies the satisfaction obtained in post-consumption, in the following categories:

i) If the prerequisite expectation scale before purchase is greater than the post-purchase satisfaction scale, the product requirements must be improved (negative attributes).

ii) If the pre and post purchase attributes are equated, it will only prevent the customer from being dissatisfied (neutral attributes).

iii) If the prerequisites before the purchase are lower than the post-consumer satisfaction, it means that the product is at optimal levels in relation to the market (positive attributes) and meets the consumers’ needs and desires.

### III. RESULTS

The consumption of organic products in Paraná Coast presented a slight predominance in the female gender (n = 52%), however, a significant statistical difference was not detected in the annual frequency of consumption among genders (Mann-Whitney Test = p <0.001) (Table 1).

The predominant purchasing age groups (56.52%) were between 20 and 39 years old, but no correlation was observed between the age of the consumer and the number of times per year these people purchased organic products for their alimentation (Table 1).

Education was a decisive factor for the consumption of organic products in Paraná Coast, presenting statistically significant differences in consumption after post-graduation (Table 1).

Related to the marital status, a strong tendency to increase consumption was observed as the interviewees progressed in the family arrangement and constituted marital relations, as well as the presence of dependents (Table 1).

The economic class showed a slight tendency to increase consumption as income increased (Table 1). The normality of the data, according to one proposed by Hair et al. (2009) was analyzed by the Kolmogorov-Smirnov test, and the test results (p <0.05) led to the decision to use non-parametric tests.

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From R$2.250 to R$3.999

From R$4.000 to R$7.799

From R$7.800 to R$18.799

r – Spearman Correlation Coefficient;
p – significance value (p < 0.05)

Table 2 - Organic vegetables that the consumer from Paraná Coast would like to consume but does not find in the market (N = 138, June to August, 2017).

<table>
<thead>
<tr>
<th>Raking</th>
<th>Vegetables</th>
<th>% Raking</th>
<th>Vegetables</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tomato</td>
<td>7,26</td>
<td>Sweet potato</td>
<td>3,18</td>
</tr>
<tr>
<td>2</td>
<td>Lettuce</td>
<td>5,58</td>
<td>Garlic</td>
<td>3,00</td>
</tr>
<tr>
<td>3</td>
<td>Potato</td>
<td>5,58</td>
<td>Broccoli</td>
<td>2,94</td>
</tr>
<tr>
<td>4</td>
<td>Chayote</td>
<td>4,74</td>
<td>Cabbage</td>
<td>2,88</td>
</tr>
<tr>
<td>5</td>
<td>Carrot</td>
<td>4,62</td>
<td>Pumpkin</td>
<td>2,64</td>
</tr>
<tr>
<td>6</td>
<td>Strawberry</td>
<td>4,56</td>
<td>String bean</td>
<td>2,64</td>
</tr>
<tr>
<td>7</td>
<td>Cauliflower</td>
<td>4,50</td>
<td>Onion</td>
<td>2,40</td>
</tr>
<tr>
<td>8</td>
<td>Zucchini</td>
<td>4,32</td>
<td>Sugar-beet</td>
<td>2,28</td>
</tr>
<tr>
<td>9</td>
<td>Cucumber</td>
<td>4,32</td>
<td>Okra</td>
<td>2,04</td>
</tr>
<tr>
<td>10</td>
<td>Watercress</td>
<td>3,96</td>
<td>Chive</td>
<td>1,86</td>
</tr>
<tr>
<td>11</td>
<td>Spinach</td>
<td>3,90</td>
<td>Orange</td>
<td>1,74</td>
</tr>
<tr>
<td>12</td>
<td>Cassava</td>
<td>3,72</td>
<td>Chicory</td>
<td>1,56</td>
</tr>
<tr>
<td>13</td>
<td>Rucula</td>
<td>3,72</td>
<td>Green</td>
<td>1,26</td>
</tr>
<tr>
<td>14</td>
<td>Eggplant</td>
<td>3,42</td>
<td>Pepper</td>
<td>1,14</td>
</tr>
<tr>
<td>15</td>
<td>Green cabbage</td>
<td>3,24</td>
<td>Apple</td>
<td>0,96</td>
</tr>
</tbody>
</table>

Question with simultaneous choices

In relation to the marketing mix, consumer dissatisfaction was predominant in the factors related to the 4Ps of marketing (price, place, promotions and product), and the highest levels of discontent were observed in the attributes associated to the price and how easy to find the product for consumption (Table 3).

Table 3 - Index of satisfaction of attractive and obligatory quality of the consumer in relation to the marketing mix of the organic products trade – Kano Model (1984) (n = 138); (Paraná Coast, June to August 2017).

<table>
<thead>
<tr>
<th>Prereq Attribute</th>
<th>Satisfac- tion post-purchase (aver- age grade)</th>
<th>Atribu- te DM S* (aver- age grade)</th>
<th>Raki- ng</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>4,91 a</td>
<td>2,91 b</td>
<td>-</td>
</tr>
<tr>
<td>Place</td>
<td>4,78 a</td>
<td>2,82 b</td>
<td>-</td>
</tr>
<tr>
<td>Form of shelf exposure</td>
<td>3,59 a</td>
<td>3,02 b</td>
<td>-</td>
</tr>
<tr>
<td>Finding the desired amount</td>
<td>4,44 a</td>
<td>3,05 b</td>
<td>-</td>
</tr>
<tr>
<td>Service Quality</td>
<td>4,63 a</td>
<td>3,51 b</td>
<td>-</td>
</tr>
<tr>
<td>Promotion</td>
<td>4,78 a</td>
<td>2,89 b</td>
<td>-</td>
</tr>
<tr>
<td>Product Quality</td>
<td>4,88 a</td>
<td>3,40 b</td>
<td>-</td>
</tr>
<tr>
<td>Product Appearance</td>
<td>4,53 a</td>
<td>3,34 b</td>
<td>-</td>
</tr>
<tr>
<td>Packaging appearan- ce</td>
<td>3,95 a</td>
<td>3,28 b</td>
<td>-</td>
</tr>
<tr>
<td>Origin informat- ion</td>
<td>4,62 a</td>
<td>3,37 b</td>
<td>-</td>
</tr>
<tr>
<td>Number of units per package</td>
<td>3,64 a</td>
<td>2,94 a</td>
<td>-</td>
</tr>
<tr>
<td>Vegetables Standard</td>
<td>3,43 a</td>
<td>2,93 b</td>
<td>-</td>
</tr>
</tbody>
</table>
The producer's fairs due to the practicality were the most preferred place for the consumer to buy organic products in Paraná Coast, followed by the large supermarket chains (Table 4).

**Table 4 - Purchase place for consumers of organic vegetables in Paraná Coast (N = 138, June to August, 2017).**

<table>
<thead>
<tr>
<th>Purchase place</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Producers’s Fairs</td>
<td>53.59</td>
</tr>
<tr>
<td>Supermarket (Large Chains)</td>
<td>17.65</td>
</tr>
<tr>
<td>Neighborhood market</td>
<td>12.42</td>
</tr>
<tr>
<td>Greengrocers</td>
<td>9.80</td>
</tr>
<tr>
<td>Municipal market</td>
<td>4.25</td>
</tr>
<tr>
<td>Stores specialized in organic products</td>
<td>2.29</td>
</tr>
</tbody>
</table>

**IV. DISCUSSION**

The study revealed that gender and age are not factors that affect consumer behavior for organic products in Paraná Coast. However, the marital status of the consumer can be classified under the conditions analyzed as a factor of consumption influence.

Apparentl the family arrangement is a decisive factor in the purchase and investment processes of the family. Rocha and Barros (2006) emphasize that decisions about family security are most often taken in the direction of the future planning, and takes into account the prudence, which can also be expressed both in the construction of a patrimony for the continuity of the family nucleus, guaranteed thanks to the preventive and calculated action of the decisions related to the family issues.

In this context, organic food is perceived as products of better quality and that influence health over time, as also described by Krischke and Tomiello (2009), which reveals that consumers of organic products as they progress in the composition of the family arrangements seek to protect future generations through the right food, in addition to over time they include in the family culture the similarity by this type of production.

The family arrangement favors the consumption of organic products, and this factor is enhanced as the growth of the number of people in the family, as well as the school education of the consumers increases, this factor may be due to the greater concern with family health.

Financial income also appears to be an influential factor in the consumption of organic products, since it was perceived a moderate tendency to increase consumption as income rose, in this context according to Blackwell et al. (2015) there is a portion of consumers who are predisposed to pay a higher price as long as they have access to the desired product with quality. In this perspective, Moretti (2014) highlights the values added to organic products as a result of being an ecological and healthy product. However, in the lower income classes, this trend cannot be observed, since it would compromise the family budget.

The assumptions described above can be confirmed in relation to the market mix, and the highest levels of dissatisfaction were perceived in the attribute related to the price that was classified as high.

According to Kotler (2009), in all market segments, the price is the first factor that influences levels of satisfaction with a purchase of the vast majority of consumers. The lower purchasing power families naturally seek to make the choices among the available products, those that are more easily perceived as a good cost equation in relation to the benefit, and so it adjusts to the choices to the consumer with this economic reality.

In this context, for the organic products can reach a wider range of consumers, it is necessary that retailers promote a series of adjustments that contribute to this popularization of organic products.

Studies carried out in Paraná Coast for products not classified as first necessity (ANACLETO et al., 2017) revealed the need to adapt the marketing prices to the reality of regional wages. Apparently these issues may also be associated to the marketing context of organic products. Thus, apparently a challenge for traders is the adequacy of the price aligned with the reality of the region, and the reduction of the cost difference between conventional foods.

The retailers with greater marketing power as described by Moretti (2014) generally offer organic products with a much higher price when compared to the free markets that exist in the several cities of the region, thus the reduction of the margins of profitability linked to the use of promotions can create a more favorable environment for consumption of organic products, benefiting the population and without reducing the profitability of the retailers that according to Cobra (2015); Cruvinel et al. (2017); Riegoff (2017) may have the reduced profit margin offset by the quantity of products commercialized, resulting in a win-win relationship.

The commercialization of the local production by the retail chain seems to be an important alternative in the strengthening of the regional trade of organic products, since according to Anacleto et al. (2017), most of organic products production in the coast is taken to large commercial centers especially CEASA in Curitiba, where
they are acquired by regional retailers who seek in that distribution center the products to be marketed.

The approximation between retailers and producers, according to Cobra (2015), Cruvinel et al. (2017) and Etingoff (2017) creates a collaborative environment, and could result in a remarkable business opportunity, where cost reduction for transportation logistics can result in better price paid to the producer, lower purchase cost to the retailer and lower final consumer price, as also described by Blackwell et al. (2015).

Once the price factor has less influence with the consumers other shared strategies can also be adopted to make consumption easier. Awakening interest in a particular product can be classified as the first obstacle to experimentation, as the consumer has access to information on the advantages of the product, arises the curiosity for experimentation. The buying process can then be touched, and with the experience of the first purchase, repetition can occur if the organic product presents high satisfaction in the consumer’s perception.

According to Moraes et al. (2015) it is necessary to create a favorable scenario, among the practical actions that can be taken in the medium and short term, highlight educational activities, advertising relating the importance of the sustainable factor of organic products with health and environment and quality of life, which may be relevant factors in the interests of consumers who are unaware of the benefits of this productive system in the search for more information.

Other factors besides the price should also be considered by the retailers chain in meeting the expectations and desires of organic product consumers when proposing marketing actions, factors reported as reasons for dissatisfaction as the difficulty of finding the products in retail establishments, the products appearance that were classified as negative and the almost absence of promotions related to this type of commerce, and especially that marketing actions could reach the target audience that actually attends the retail establishments and promote the decision for the purchase.

Although the consumer with lower income is apparently an unfavorable factor for consumption, it should be emphasized that incentive actions favoring consumption, such as the appropriate price for the region, the offer of promotions and educational campaigns, linked to the trade of products produced by local producers, can result in a scenario where the end consumer can be benefited with food with easier access, fairer price and higher quality can represent advances in the consumption by the classes of less economic power.

In a general scenario, it is possible to emphasize that a targeted and properly formulated marketing strategy has the purpose of overcoming customer expectations at the time of purchase, generating new product acquisitions and, consequently, customer loyalty (VIEIRA, 2012).

Thus, in addition to the agro-ecological fairs, the alternatives of purchase places are one of the factors that can potentiate consumption and as described by Cruvinel et al. (2017) greater supply results in practicality to the consumer, and Anacleto et al. (2017), emphasizes that the local production trade from direct contact between the producer and retailer, benefits the consumer and can result in consumer loyalty conscious.

V. CONCLUSION

The study showed that the consumption of organic products in the sampling performed presented similar levels between the genders, as well as did not present variation in the consumption in relation to the age group.

The organic products most preferred by consumers were tomatoes, potatoes and lettuce, and the factors limiting the increase in consumption were the price classified as high, the difficulty of finding the products easily and the absence of promotions.

The study revealed that the factors the influenced the consumer behavior of organic products were school education at the highest levels, family arrangement and economic income.

The adoption of shared strategies among the retail trade that involve, the adjustment of prices of organic products to the reality of consumers, the purchase of local production as a way of reducing the prices, and educational marketing campaigns that can favor the commerce of organic products in the classes with lower purchasing power.

REFERENCES


