



## AGROECOLOGICAL MARKETING AND TRAINING SPACES: LESSONS LEARNED AT UNIVERSIDAD CENTRAL DEL ECUADOR

### ESPACIOS DE FORMACIÓN Y COMERCIALIZACIÓN AGROECOLÓGICA: LECCIONES APRENDIDAS EN LA UNIVERSIDAD CENTRAL DEL ECUADOR

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#### Abstract

Agroecological marketing spaces have expanded in the country, due to the importance that both consumers and producers are giving to this kind of production. However, the interaction that occurs between consumers and producers at fairs and how the latter become a pedagogical space for both of them has not been studied in depth. Therefore, the fair at Universidad Central del Ecuador was analyzed. Various research techniques were used, mainly interviews, surveys and bibliographic review on agroecology, agroecological markets, short agroecological networks and marketing. Two surveys were applied to consumers in the agro-ecological fair at Universidad Central del Ecuador. The first survey was applied to frequent consumers. The second one was applied to the same actors, once the fair was consolidated, to corroborate their preferences. This article aims to answer the following question: What have been the main lessons learned from the fair, as both a training and marketing a space for students, producers and consumers? The main conclusions show that the creation of the fair at Universidad Central represents an encounter between agroecology, education and social transformation within the academic curriculum, which also allows to identify the elements of environmental education that are implemented in the current educational project. It was also concluded that consumers prefer agroecological products for health reasons, since they consider these products are cleaner than conventional ones. Finally, regarding the challenges and limitations of the study, it is worth mentioning the need to compare similar experiences with other educational centers, to generate joint learning experiences about these fairs.

**Keywords:** Agroecological markets, agroecology, consumers, producers, agroecological fair, marketing spaces.

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### Resumen

Los espacios de comercialización agroecológica se han expandido en el país, debido a la importancia que los productores y consumidores le están dando al origen y la forma de producción de los alimentos. Sin embargo, poco se ha estudiado sobre la interacción entre consumidores y productores en las ferias, y cómo éstas se convierten en espacios de aprendizaje y comercialización para ambos actores. Por ello, se analizó la feria de la Universidad Central del Ecuador, ya que es uno de los pocos casos en el país que es impulsado por un establecimiento educativo. Para lo cual se planteó indicar las principales lecciones aprendidas de la feria, como un espacio de formación y comercialización entre estudiantes, productores y consumidores. Se emplearon diversas técnicas de recolección de datos, como entrevistas, encuestas y revisión bibliográfica sobre agroecología, mercados agroecológicos, circuitos cortos, redes y comercialización agroecológica. Se aplicaron dos encuestas a los consumidores de la feria. La primera encuesta fue realizada a los consumidores frecuentes en los primeros seis meses de funcionamiento, y la segunda encuesta después de un año, una vez que la feria estaba funcionando regularmente, para corroborar sus preferencias de consumo. Los principales resultados indican que los consumidores son en su mayoría jóvenes y mujeres, que perciben a los productos agroecológicos como más sanos y naturales, lo cual influye en sus preferencias de compra. Se recomienda para futuras investigaciones de la Universidad profundizar en los roles, conocimientos y procesos de decisión inmersos en el consumo de productos agroecológicos.

**Palabras clave:** Mercados agroecológicos, agroecología, consumidores, productores, feria agroecológica, espacios de comercialización.

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## 1 Introduction

Agro-ecological marketing has spread throughout Ecuador in the last 15 years since the emergence of the first marketing networks (Intriago and Amézcuca, 2016). According to the inventory carried out in 2014 by the commercial networks office of the Ministry of Agriculture and Livestock (MAG), as part of the Alternative Marketing Circuits project (CIALCO), there were 210 marketing points nationwide, including fairs and shops. These marketing points are mainly carried out in the Highland with 154 traders, followed by the Coast with 53, the East with 18 and finally Galapagos with three traders (HEIFER, 2014). Marketing areas are generated by the consumer's concern about the origin and the way the food is produced. At the national level, this concern has allowed the creation of various fairs, shops and other marketing forms of agro-ecological products, mainly locally (cities, neighborhoods and parishes), conducted mostly by women (Macas and Echarry, 2009) and in many cases with the support of decentralized self-government (GAD), non-governmental organizations (NGOs) and universities, which take advantage of these spaces for the training of their students, consumers and producers.

In 2017, Universidad Central del Ecuador (UCE) thought about creating an agro-ecological fair under two objectives: 1) develop a marketing space for the production of food obtained from the farms of the Faculty of Agricultural Sciences, and 2) create a training environment for its students in order to promote agro-ecological production as an alternative to conventional production. Modern conventional production is characterized by the intensive use of agrochemicals and monocultures, considered nowadays as unsustainable, in contrast to agroecological production that promotes a more diverse production without the use of agrochemicals, being more economically sustainable, environmentally friendly and healthier for humans (Rosset, 1998).

UCE fair is part of the so-called Short Marketing Circuits (CCC) or Food Circuits of Proximity (CIALP), understood as spaces of relationship between peasants or farmers, markets and territories, where products are marketed without intermediaries; these products come from nearby places and are based on the trust between producers and consumers (Ranaboldo and Arosio, 2016; Heinisch,

2017). In the case of the UCE fair, this CCC or CIALP is based on the production under the agroecology principles, understood by several authors as the management and application of ecological principles in agrosystems, which improve soil nutrient retention capacity with plants that are more resistant to pests and diseases, having a relationship between science, practice and knowledge that seek to transform the current agro-food system (Altieri, 2002, 2009a; Gliessman, 2015; Minga, 2016). It is also defined as a science and a set of practices for the construction of a healthy and sustainable agroecosystem (Castillo, 2002; Altieri and Toledo, 2011; Altieri and Nicholls, 2012).

Agro-ecological fairs are spaces of alternative marketing where the producer-consumer relationship occurs in a direct way, favoring food sovereignty, environmental sustainability and producing an equitable relationship between rurality and urbanity (Contreras Diaz et al., 2017). At these fairs, diverse products are sold and are mostly cultivated by farmers, reason for which supermarkets do not have access to this type of product (Intriago and Amézcuca, 2016). These are spaces that promote fair relations between producers and consumers (Lacroix and Cheng, 2014). For this reason, agroecological fairs can be defined as marketing spaces for the production of agro-ecological products. These marketing spaces are framed in the so-called alternative food networks (RAA), the CCC or CIALP (Heinisch, 2017; Goodman and Goodman, 2009).

Agro-ecological fairs allow the small producer to increase production by offering products in the CCC or CIALP, thus increasing the economic income to the producer and at the same time guaranteeing healthier and cleaner food to consumers, providing sustainable food trading (Contreras Diaz et al., 2017). CCCs or CIALP become another option to obtain food, besides supermarkets, long agri-food chains and conventional production (Chauveau et al., 2010).

These products have a growing consumer preference in several European countries, because they are considered to have higher quality and a lower environmental impact than agro-industrial products (Renting et al., 2003). Agro-ecological fairs are also part of the RAA, which are understood as spaces in the food economy that include agro-

ecological, fair-trade and local food; these networks are characterized by being related spatially, economically and socially (Goodman and Goodman, 2009). These marketing spaces for agro-ecological products through RAA, CCC or CIALP can generate linkages between individuals concerned about the origin of food in order to promote new forms of access to food in the future and to respond to more responsible consumption (Soler and Pérez, 2013). Thus, consumers propose that alternative networks are accompanied by training in food issues. In some cases, they have even managed to transform consumers into producers of some of their food through urban agriculture initiatives (López, 2011).

For this reason, with the aim of achieving a coherent educational process where teaching - learning is aligned with the active participation of producers and consumers, the career of Agronomic Engineering implemented the agro-ecological fair based on three fundamental foundations: 1) agroecology understood as an educational project involving the transformation of agricultural practices, making them participatory by integrating the producer with the nature and the consumer in order to make agriculture a sustainable activity in accordance with the six purposes of environmental education: awareness, knowledge, attitudes, skills, evaluation and participation, mentioned by Galiano and García (2002). 2) a liberating education based on an educational practice that cultivates, fosters and integrates human aspirations in society. 3) the transformation of society conceived as a practice of dialogue between science and knowledge, where knowledge is collective. As mentioned above, the educational process in the Faculty of Agricultural Sciences is understood as a relational process, i.e., there is a permanent dialogue between the professor and the student, assuming that this dialogue is situational, which goes beyond the simple relationship between people and becomes a relationship with the reality of a society in a historical cultural context. Therefore, methodological practice breaks the traditional conception of education in the aspect known as agricultural extension or pre-professional practice based on the techniques of green revolution.

According to Sverdlick (2007), research widens the educational process, starting from empirical knowledge that carries implicit theoretical-scientific knowledge. Hence, the academic program intert-

wines theory-practice, responding to society's demand for sustainable agriculture. The aim of the fair is to promote the processes that lead to the implementation of the agro-ecological model through the inclusion of environmental education in the educational project, understood as a process of relationship, environmental awareness, ecological knowledge and application of human attitudes and values with their environment, for generating processes that contribute to the sustainability of the ecosystem (Castillo, 2010). The latter is possible if the educational community feels the need to transform reality, i.e., to reach collective awareness, so that the agro-ecological model is not an imposition but an alternative to ecosystem degradation, allowing a transformative praxis.

This article aims to present the main lessons learned from the UCE fair implemented as a space for training and marketing of agroecological products among students, producers and consumers. Therefore, the objective is to analyze the main learning and results obtained at the fair since its creation, due to it is one of the few cases in the country that is driven by an educational establishment where there is an interaction that includes producers (who are at the same time students), consumers and the participation of teachers.

## 2 Materials and methods

Qualitative and quantitative techniques were used in combination. First, bibliographic research was carried out in various scientific journals (Jstor, Taylor & Francis, Scopus), virtual libraries (digitalia, elibro) and university repositories (UCE, Salesian Polytechnic University and Andean University). The approach used was based on agro-ecological marketing spaces for training, using the following search criteria: Ecuador, agroecology, agroecological fairs, agro-ecological markets, food sovereignty and alternative marketing networks/circuits. The result of this review generated a total of 40 sources of information, distributed in 23 articles of mainstream scientific journals, eight specific articles on the subject, seven books and two research papers (undergraduate thesis) on agroecological markets, CCC and RAA mainly. It should be mentioned that no specific information regarding agro-ecological fairs was found as training spaces.

Additional information was collected from consumers at the UCE agro-ecological fair using two surveys at different times. The first survey was applied at the beginning of the fair, i.e., between January and March 2018, and the second between October and December 2019, once the fair was running regularly, to corroborate their consumption preferences. The first survey had two sections: 1. consumer characteristics and 2. characteristics of the product demanded. This survey consisted of 88 questions that looked at aspects such as the age and gender of consumers, as well as frequencies and quantities of purchase products at the fair, and it was applied to frequent consumers of the fair. The second survey looked at complementary aspects through three questions related to the motivations for the purchase at the fair, the origin of the consumer (UCE teacher, UCE employee, student or people who are not related with UCE), as well as the degree of knowledge of what is an agroecological product. Both surveys were applied to 35 consumers in a total group of 120 average weekly consumers. Random consumers were selected during the first hour of the fair (the operating hours are: 10:00 to 13:00), because it is in this time range that there is the greatest number of consumers. It should be

mentioned that in each of the surveys there was representation of the different members of the university community (teachers, administrative / workers and students), as well as people not belonging UCE.

Subsequently, meetings were held with the coordinators of the agro-ecological fairs of Quito ("La Carolina" fair, "Universidad Andina Simón Bolívar" fair, "Carcelén" fair) in order to know their experiences and compare them with UCE fair. The information of the fairs and the surveys applied, as well as the bibliographic information, work as the basis for determining the potential of agro-ecological fairs as training spaces for consumers and producers.

### 3 Results

The agro-ecological fair of UCE participates in the educational community, which allows the study of the different variables of agroecological production and marketing in a social and academic environment. Figure 1 shows the age groups of consumers who attend it. It was observed that the average age is 41 years, with ages ranging between 22 and 73 years. Most consumers are in the range of 40 to 70 years.

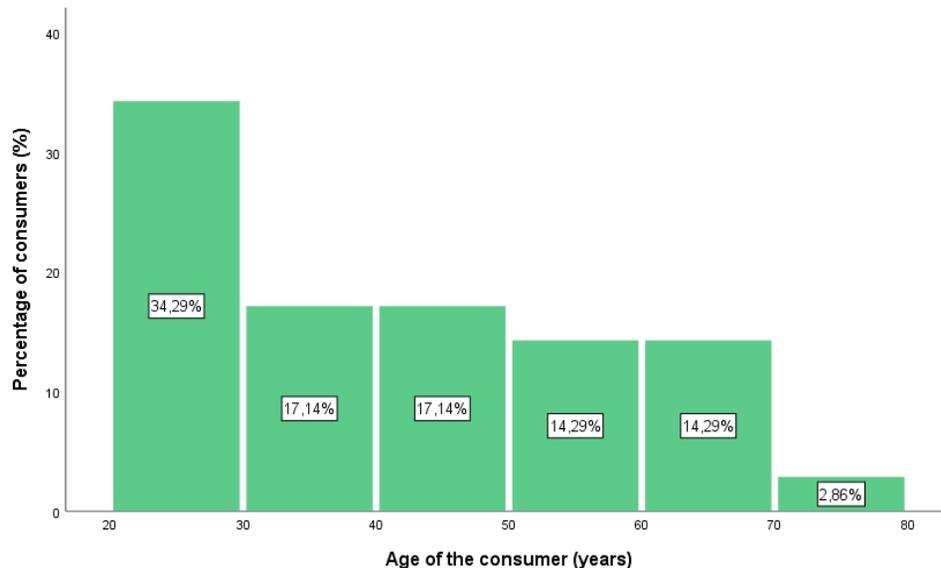


Figure 1. Age groups of consumers of the UCE fair.

Figure 2 shows the average monthly revenues of consumers, which are mostly between 500 and 1000, representing 54.29%, followed by revenues of more than \$1000 with 37.14%, and less than \$500 with

8.57%. These results place most fairgoers in the middle class, understood as the one that has a certain degree of economic stability and can afford the basic basket (Orellana and Osorio, 2014).

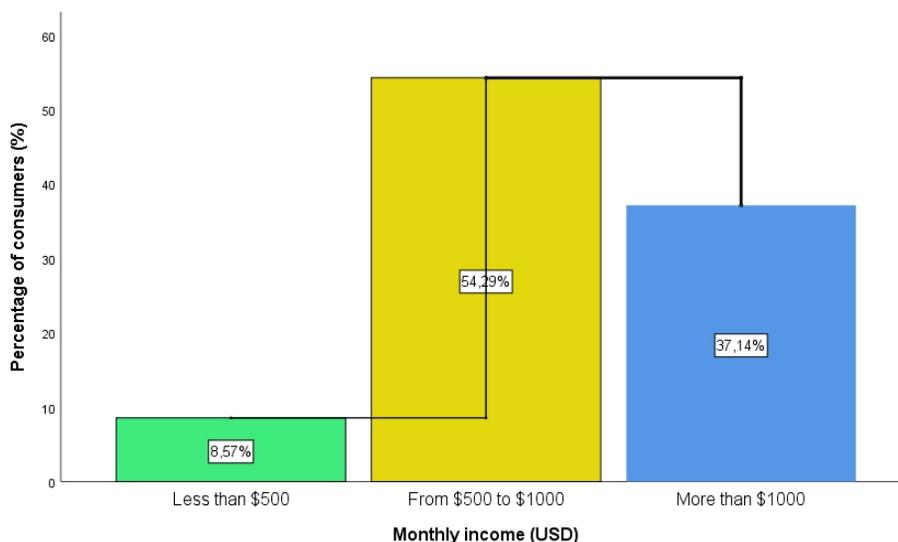


Figure 2. Average household income from consumers attending the UCE fair.

Most consumers were students and UCE administrative employees with 36.67% and 30.00%, respectively; also, there are external consumers who are made up of residents around the UCE with 26.67%, and finally UCE teachers (6.67%) as seen in Figure 3. These data indicate that students, most of whom are women 60%, are an important player in the consumption of agroecological production on the UCE farm, which could generate a dynamic trade oriented to this group of consumers on and off the university campus. The above indicates that the fair has been a space where knowledge and experience are shared between producers and consumers, including teachers, students, workers and internal and external consumers in a responsible and healthy production. On the other hand, the results show that 71.4% of people who attend the fair are women, probably because women pay more attention to eating healthy food from agroecological products compared to men. This result indicates that efforts to raise awareness in men is important for their more active participation in fairs, and to

encourage more consumption of agro-ecological foods.

Consumers at the fair also showed a good understanding of what an agroecological product is. Figure 4 shows that 60.00% of consumers related agroecological products to the production of chemical-free foods, 20.00% to natural products, 13.3% to products from a sustainable agro-economy system, and 6.67% to products without genetic manipulation. The results in Figure 4 represent the most common definitions of an agroecological product from the consumer's point of view. In these definitions, it is noteworthy the absence of socio-economic elements, such as more social justice of the production or the principles of agroecology. This absence indicates that further training is needed in the social and political proposal of agroecological production in consumers, but also that current knowledge about agro-ecological product can be used to promote future marketing fairs.

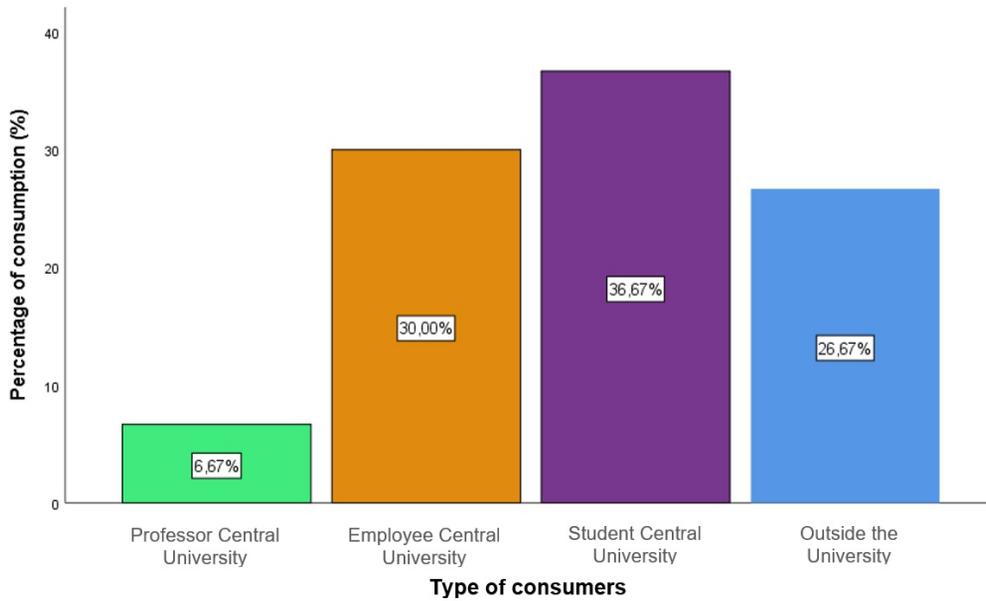


Figure 3. Average consumption of agroecological products at the UCE fair.

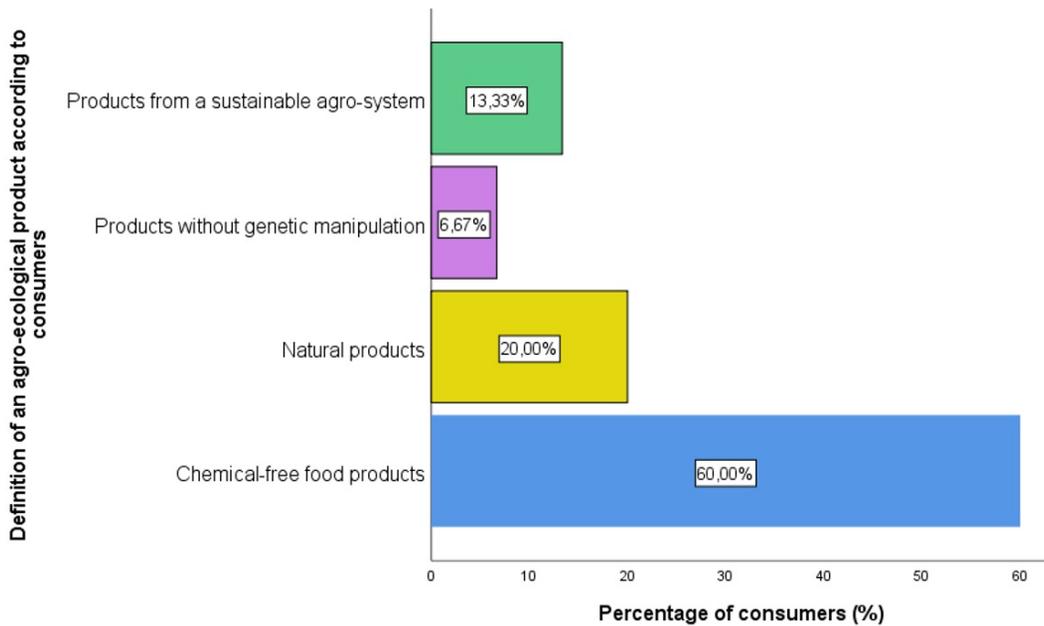


Figure 4. Average frequency of the definition of an agroecological product according to the consumers of the UCE fair.

As can be seen in Figure 5, the results show that the main motivations of consumers to buy the products at the fair are mainly because these are agroecological or organic by 50.00%, followed by the price by 25.00%, by health (17.50%), other reasons (5.00%) and because they trust UCE (2.50%).

Regarding the purchase preference, it should be mentioned that the products generally offered at the UCE fair consist of a variety of vegetables, among which certain marker products can be mentioned, i.e., those that are demanded and have a continuous

production at the Experimental Academic Center “La Tola” (CADET) as: kidney tomato, tree tomato, maize, carrot, pepper and dairies (yogurt). When the fair occurs, it finishes one the products are sold out. There are no products made with the exception of yogurt, some vegetables and fruits. Probably increasing supply and training events with consumers would be needed to encourage consumption of new products.

This exchange of knowledge and experiences on environmental education and tools for life allows students of the UCE Career of Agronomic Engi-

neering to contribute to the construction of Ecuador’s food sovereignty, in accordance with Navarrete and Madoery (2017) and in the declaration of Nyéléni Selingue (2007), which mentions that the agroecological approach is a fundamental pillar for the construction of food sovereignty. Students with the help of teachers apply the concepts of agroecology at the fair in order to achieve what Altieri (2009b) and Escandón (2012), mention about promoting biological balance, reducing pest and disease cycles, productive and economic risks and increasing yields while contributing to soil conservation and agrobiodiversity.

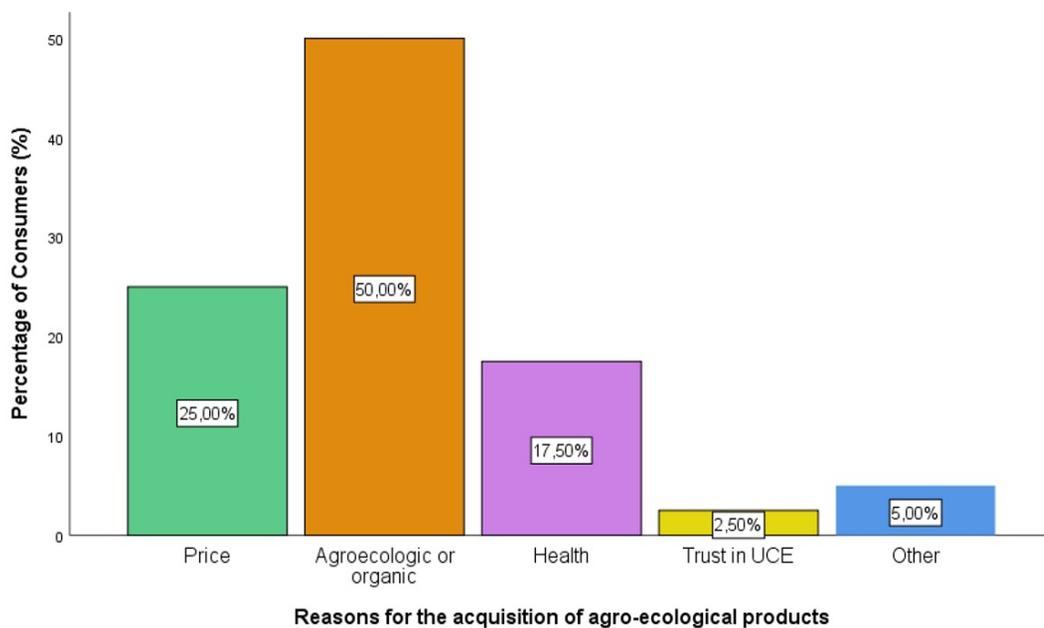


Figure 5. Motivation to buy the products at the UCE fair.

## 4 Discussion

The alternative from short circuits is already beginning to be strongly discussed as a way to replace the supermarket-dominated urban food distribution system, which controls the supply in cities, supported by the principles of food sovereignty that proposes access to healthier, culturally adequate and agroecologically produced food (Rosset, 2003). In Spain, for example, more than 25% of consumers buy their food in traditional stores and other alternative stores (MAGAP, 2016), which is an important percentage that can increase with the presence

of more responsible consumption groups. However, consumers’ relation of agroecological products versus supply is still low, but it is growing due to increasing consumer concern about the health effects of processed food. For example, it is increasingly common to find social movements that demand food, trade and fairs in cities to have a better access to organic food or slow food, among others (Harper et al., 2009), which advocate direct supply between consumers and producers.

Currently, the city is struggling with the production model based on agrobusiness and the global

agro-food system (SAG) (León-Vega, 2018). In the city, consumers play an essential role in the construction of new forms of access to food, fighting to recover spaces between producers and consumers (popular markets, agro-ecological fairs), and contribute at the same time to the construction of food sovereignty by strengthening consumer and producer rights (Harcourt, 2008). Consumer's concern in Quito has led to the signing of the Quito Agro-Food Pact (PAQ), made up of consumers, academia, cooperation agencies and others, in order to collaborate in the formulation of public policies for food (ConQuito, 2018).

There are two legally endorsed groups of organic/agroecological food in the Metropolitan District of Quito: the Ecuadorian Corporation of Biological Farmers (PROBIO) and the Participatory Urban Agriculture Program (AGRUPAR), promoted by the Economic Promotion Agency of Quito (ConQuito) (Chamorro, 2015). On the one hand, PROBIO (2013) cited in García (2017), indicates that agroecological fairs are organized by the fair members and work under the participatory guarantee system (SPG) (ConQuito, 2016), and that bio-fairs are alternative marketing spaces where farmers offer organic products at fair price and directly to the consumer. It should be mentioned that there are more fairs in Quito, however, they are not legally registered or they are sporadic.

The production and marketing of organic/agroecological products at CCCs or CIALP in Quito have caused socioeconomic benefits to producers and consumers. Products from farmers' orchards generate savings from self-consumption and allow them to have economic income of USD 127 on average per family, as well as encouraging women's participation in the production process. Meanwhile, consumers buy healthy food at affordable prices by reducing their health expenditures, contributing to the development of fair trade and ecosystem conservation (Clavijo, 2013).

In this sense, Sotomayor (2013) says that the Agroecological Fair, Art and Culture "La Carolina" is the first fair in the country with these characteristics, created in May 2008 with the aim of selling food and crafts based on agroecological production. With regard to the consumers of this fair, Sotomayor (2013), indicates that there are three groups: fre-

quent consumers, occasional consumers and consumers who attend for the first time. Sotomayor (2013), states that the motivations for attending the fair are due to three main factors: 1) The supply of healthy, fresh, natural, organic and agroecological products; 2) The inclusive space where all kind of people meet to talk, share and enjoy; and, 3) The consumer-producer relationship based on fair trade, solidarity economy and food sovereignty.

On the other hand, Basabe et al. (2016), indicate that the Zapallo Verde Cooperative (CZV) has been on the market for more than a decade, and its main objective is to sell its products directly to consumers in a responsible, supportive and participatory way. Products are offered according to the season and are produced under agroecological techniques. The cooperative is structured by coordinators, consumers and producers. The objective of the CZV is to have agro-ecological production that promotes local and trade production with short circuits, leading to fair payment and direct participation of producers in the trade chain.

Likewise, Romero (2015) points out that "Plaza Cívica Eloy Alfaro" fair is the first to venture in southern Quito in 2007. It consists of 20 participants from 11 orchards between 200 and 1000  $m^2$  that produce legumes, grains and handcrafted products. For producers, agro-ecological principles are considered as an alternative of social agriculture, which is economically equal and is sustainable over time, resulting in a qualitative change where productive units represent a space with an integral and balanced perspective. Consumers attend the fair weekly looking for organic, healthy and fresh food, and by knowing the person who produces it and how it is produced. According to Romero (2015), the fair is a social and happy space where marketing occurs in a collaborative way, without competition. In its beginnings, it had to overcome obstacles such as the perception of consumers about products that seem to be smaller and more expensive compared to conventional food; it occurred especially in the south of the city, where citizens would probably not value organic production.

Regarding the UCE agro-ecological fair, the results indicated that the most predominant age group at the fair was between 20 and 30 years, which is consistent with the age of the group with

the greatest participation in the fair and which corresponds to female students. Those who attend the fair are mostly women, which may be because agroecological fairs mainly encourage the participation of women (Clavijo, 2013) since they consider this food healthier for their families.

On the other hand, the lowest percentage of consumers at the UCE fair is for teachers, which contrasts with consumers at the Andean University fair, where most buyers were teachers and workers (Izurietta, 2018). A significant high percentage of consumers outside the University is also noteworthy, although there is not any communication and dissemination by the authorities on these fairs at UCE. According to consumers at the UCE fair, it was observed that they relate an agroecological product with natural products and the production of organic food.

As for the average income of the fair's consumers, they were in the range of USD 500 to USD 1000 per month, which is similar to consumers at the Carcelén fair (Chalá, 2017) and Andean University (Izurietta, 2018), but quite different from the Carolina fair, which has consumers with incomes over USD 1500 per month (Vasco et al., 2015), since this fair is located in a place where the socioeconomic level of inhabitants is higher than the others mentioned.

The main reasons for the acquisition of agroecological products at the UCE fair were because these are agroecological or organic products, which is a similar reason to the consumer preferences of the Carcelén fair (Chalá, 2017), probably because the two fairs are located in places where their inhabitants have a similar socio-economic situation. Finally, it is important to mention that the results of the research on the UCE agro-ecological fair will suggest the initial actions to be carried out by the authorities, with the ultimate goal of obtaining a balance between sustainable agro-ecological production for a purely academic purpose and the real requirements of consumers.

## 5 Conclusions

The main conclusions of this study indicate that the most representative age of people attending the fair ranges from 20 to 30 years, therefore it is young con-

sumers who have more openness to buying agroecological products and who would represent more potential for expansion in the medium term.

Women are the ones who attend the fair the most, indicating that the presence of women should be highlighted not only in the production processes but also in the marketing processes of the fair, just as equal participation in the future should be promoted.

There is little involvement of the UCE professors, probably due to the low communication between professors and the university community about the conduction of the fair, however, "external consumers" have a significant participation.

Consumers also perceive agroecological products as healthy, natural and organic products. These findings will allow to direct future complementary research that deepens on these aspects, such as perceptions about the agroecological knowledge of people who make up the university states (students, teachers and administrative staff).

Revenue between \$500 and \$1000 represents the majority. However, it should not be dismissed that the largest presence at the fair is represented by students, who despite having no significant economic income are a transfer agent of knowledge acquired to the university community.

Consumers buy products at the fair mainly because they are agroecological or organic, indicating that they have good prior knowledge of this type of product.

The research carried out about the training of consumers and producers has identified the application of environmental education in the educational project and its curriculum, which is confirmed by observing the role of employees, students, professors at UCE, outside UCE and the agroecological products offered at the fair. According to their motivation to buy, it has also intrinsically allowed to observe the importance given by buyers to their food and health, which is essential for life.

The authorities of the agro-ecological fair of Universidad Central del Ecuador should propose the implementation of alternatives and new strategies

of social and didactic-pedagogical inclusion based on the assessment of the surveys obtained, which allow to see this fair as a training space between consumers and producers. The above strategies are directly related to the application of environmental education, whose components are awareness and sensitivity, knowledge and understanding, attitudes, skills and participation.

The training space generated by the UCE fair, which represents the meeting point between agroecology, education and the transformation of society, should influence future lines of research and projects linked with the University's society, mainly due to the need on deepening in the roles, knowledge and decision-making processes immersed in the consumption of agroecological products, in order to encourage responsible and healthy eating.

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