

EXPERIENCES OF SOLIDARITY ECONOMY AND RESPONSIBLE CONSUMPTION IN AGROECOLOGICAL MARKETS IN MEXICO: LEARNING AND CHALLENGES

EXPERIENCIAS DE ECONOMÍA SOLIDARIA Y CONSUMO RESPONSABLE EN MERCADOS AGROECOLÓGICOS EN MÉXICO: APRENDIZAJES Y DESAFÍOS

ABSTRACT

Given the dominant agribusiness and economic model that has had adverse effects within local food systems around the world, various organizational experiences have been formed within the framework of social economy and fair trade. Since the end of the decade of the 90's, in Mexico the emergence of local markets begins whose objective is to promote forms of organic production and healthy food and which, in turn, promote responsible consumption with the natural and social environment at the territorial level. In this work we reflect the different experiences of agroecological markets in central Mexico such as: Tianguis Organic Chapingo, Tianguis Alternativo of Puebla, Mercado Maculli Teotzin, Tianguis del Mayab, and Tianguis Agroecológico of José María Morelos. We expose under the focus of solidarity economy and responsible consumption, intermediation processes, participatory certification, as well as the challenges of these markets. The objective of this paper is to analyze and make visible some of the characteristics, challenges and virtues offered by these experiences around the supply of healthy foods, the consolidation of marketing channels, the recovery of physical and symbolic spaces for the exchange of products, dialogues, strategies and links, among others. For this, the contributions of the solidarity economy that puts work and the human being at the center of the discussion, are recovered, to have a positive impact on the quality of life of its participants, and thus reconfigure the social and economic relations that are showed among the different actors.

Rocío García Bustamante
Universidad Iberoamericana
rogarbus@gmail.com

Héctor Nicolás Roldán Rueda
Desarrollo y Aprendizaje Solidario A.C.
hroldan@ecosur.edu.mx

Mateo Mier y Terán Giménez Cacho
Catedrático CONACYT-ECOSUR
mmieryterangi@conacyt.mx

Laura Gómez Tovar
Universidad Autónoma Chapingo
gomezlaura@yahoo.com

Received on 21/02/2020. Approved on: 12/10/2020.
Double blind review system
Scientific evaluator: Paulo Henrique Montagnana Vicente Leme
DOI: 10.48142/2220201575

RESUMEN

Ante el modelo agroindustrial y económico dominantes que ha tenido efectos adversos dentro de los sistemas alimentarios locales alrededor del mundo, se han conformado diversas experiencias organizativas en el marco de la economía social y el comercio justo. Desde finales de la década de los años 90's, en México comienza el surgimiento de mercados locales cuyo objetivo es promover formas de producción ecológica y de alimentación sana y que a su vez, promueven el consumo responsable con el entorno natural y social a nivel territorial. En este trabajo reflexionamos en torno a cinco experiencias de mercados agroecológicos en México. Exponemos bajo el enfoque de la economía solidaria y el consumo responsable, los procesos de intermediación, certificación participativa, resaltando sus procesos de aprendizaje y sus desafíos. El objetivo es analizar y visibilizar algunas de las características, retos y virtudes que ofrecen estas experiencias en torno a la oferta de alimentos sanos, la consolidación de canales de comercialización, la recuperación de espacios físicos y simbólicos para el intercambio de productos, diálogos, estrategias y vínculos, entre otras. Para ello, se recuperan los aportes de la economía solidaria que pone al trabajo y al ser humano en el centro, para tener un impacto positivo en la calidad de vida de sus participantes, y reconfigurar así, las relaciones sociales y económicas que se despliegan entre los distintos actores.

Keywords: Fair trade; Alternative markets; Interchanges.

Palabras clave: Comercio justo; Mercados alternativos; Intercambios.

1 INTRODUCTION

It is estimated that in Mexico there are currently more than 100 market initiatives that call themselves organic, natural, agro-ecological, solidarity or alternative, since they move parallel to conventional markets that are part of agro-industrial processes and logic. These spaces have been growing since 2003. These local markets are being created by a variety of social actors, including academics, country folk, young people, professionals, and farmers, with the intention of creating alternatives in local food production and consumption (GARCÍA-BUSTAMANTE, 2015), and to a lesser extent in the processes of intermediation, understood as a solidarity/respect/fair link between producers and consumers (ROLDÁN-RUEDA; GRACIA; MIER Y TERÁN, 2018). These actors seek to exchange food based on solidarity and citizen participation. These are spaces promoted by civil society that seek to become alternatives to the hegemonic agri-food system (GARCÍA-BUSTAMANTE; RAPPO; TEMPLE, 2016), build community and promote ecological production processes.

The importance of these diverse spaces of commercialization lies in the visibility of multiple citizen actions or collective social actions undertaken to produce in an agro-ecological manner, to generate income through self-managed work and to access food that is free of toxic substances for the body and the environment. These are places located mainly in urban contexts, thus building bridges between rural, urban and periurban areas. In these markets are expanded:

“Strategies that are the result of historical, climatic, geographical and cultural territorial issues, which are expressed in the product offer, some forgotten and relegated by the homogenization of modern consumption, others present and located in the minds of consumers, and others, taken up again with new processes of transformation and final presentation; but all with the intention of being present in the processes of production, distribution and commercialization of food, in channels and forms that have important historical and cultural roots, with new modalities of encounter and linkage that try to unfold in the midst of a vortex of cold modern markets” (GARCÍA-BUSTAMANTE, 2015, p. 269).

Thus, the *tianguis* (comes from the Nahuatl word *tianquiztli*, which means market) become processes of experimentation of collective and participatory work that is manifested in different forms and through various strategies, being the transformation of intermediation and

participatory certification processes (PC) one of the main ones. In these markets, exchange processes are socialized and politicized, focusing on agro-ecology, social and solidarity economy (SSE) and food sovereignty. The SSE understood as that which reconstructs economic relations in the face of the logic of capital and seeks to build relations of production, distribution, consumption and financing based on cooperation, reciprocity and mutual aid (PÉREZ; ETXEZARRETA; GURIDI, 2008). Agro-ecology as

“A way of being, of understanding the world, of inhabiting it, of feeling it. It is a way of social relationship different from capitalism, which encourages the recovery and exchange of local knowledge, the common creation of new knowledge in the same place where the problems occur, and eco-systematic transformation according to the conditions of regeneration of life” (DA SILVA, 2014 apud GIRALDO; ROSSET, 2016, p.30).

It is because of these theoretical elements that we locate these markets as agro-ecological that develop social economy processes.

This article analyzes the contributions that these *tianguis* and alternative markets have and the challenges they face in relation to: being farmers, the organization that these markets require, production, access to agro-ecological crops and communication to link more subjects to these markets. It also outlines strategies to be able to take care of what they have, strengthen their processes, and be better articulated among those of whom participate in these expressions of social and solidarity economy.

It is also important to investigate the potential of alternative markets, given the urgent need to transform the agri-food systems that largely define our lives (their past, present and future). This type of experience reflects the dynamism present in the processes of building new market logics in which they are inscribed, representing other forms of exchange (not only goods).

Specifically, five experiences located in different contexts and with differentiated processes are presented, namely, the Chapingo Organic *Tianguis* (TOCh) formalized in 2003 in the State of Mexico; the Puebla Alternative *Tianguis* (TAP) located in the city of Puebla; the Maculli Teotzin Market, located in the State of San Luis Potosí; the Mayab *Tianguis*, based in Cancun; and finally, the Agro-ecological *Tianguis* of Jose Maria Morelos, located in the State of Quintana Roo. As a whole, the experiences presented here show the existing diversity, each with a story to tell and lessons learned that are extremely important for

the processes of transformation of agri-food systems that we live and reproduce and represent the construction of fair-trade systems and exchange relationships.

It is important to refer to these experiences in terms of their characteristics, their strategies to strengthen agro-ecological processes, as well as their scope in the construction of other visible directions of the SSE; as well as their usefulness in the processes of consumer awareness. These initiatives lead to rethinking and revaluing the support of market relations and SSE commercialization and exchange channels, responsible consumption and agro-ecology, redirecting our gaze to what gives it value beyond the financial aspect. Therefore, we ask ourselves how do we generate exchange values in these spaces of interaction, how are relations of reciprocity and solidarity being reformulated and reproduced as the basis for transformation processes, and how are these initiatives strengthening the scaling up of agro-ecology and achieving food sovereignty?

This article is divided into six sections, first presenting the general context in which the *tianguis* and alternative food marketing initiatives are being formed. It is followed by a clarification of the differentiation of these markets and the social components that make them different. Next is a brief presentation of the five experiences already mentioned. Based on these, the subsequent section emphasizes and discusses key elements that characterize these production processes, intermediation under the SSE approach, responsible consumption and agro-ecology, participatory certification, to finish with the identification of the challenges of these markets and the conclusions.

2 THEORETICAL FRAMEWORK

There is a consensus, from the reading of the activation of these initiatives, that a hegemonic agri-food system persists that is contributing greatly to exacerbating, or causing, the economic, environmental and health crises that we are experiencing on a planetary basis and in an unequal manner by all inhabitants.

Agri-food systems (MCMICHAEL, 2009; GLIESSMANN, 2013) in Mexico are highly dependent on international markets, particularly the United States (GARCÍA-BUSTAMANTE; GRACIA, 2019). Currently, Mexico imports 30% of the corn it consumes, 57% of the wheat and 82% of the rice (SIAP, 2017) that is, the country's food sovereignty —understood as the possibility of guaranteeing food supply without resorting to imports— is at risk. This situation of dependence on the international food market, allows us to identify the effects of the food

policy that has been established several decades ago, characterized by privileging large-scale conventional agro-industry and productive systems dependent on fossil fuels, by the use of fertilizers, pesticides, fungicides, among other inputs of chemical synthesis, whose consequences are reflected in desertification, air pollution, water sources and health problems —both for producers and consumers. In Mexico, this type of agriculture is responsible for 12% of the greenhouse gases that contribute to climate change, according to data from SEMARNAT (2016).

At the same time, the increase in agro-industrial production systems and land occupation favors extensive monoculture plantations, putting biodiversity at risk in different regions. This is evidenced by data from the FAO (2010), which estimates that 75% of the planet's agricultural diversity was lost over the last century. Despite this scenario, at the global level "Farmers are the main —and in some cases the only— providers of food for more than 70% of the world's population, and they produce this food with less than 25% of the resources" (ETC GROUP, 2017, p. 6). Specifically, in Mexico, they represent 66.43% of agricultural holdings (CEPAL; FAO; IICA, 2014).

Industrial agri-food systems are not only located in the production stage, but they have also increasingly entered into the distribution and sale of food. In Mexico, 50% of food sales are currently carried out in supermarkets, in urban contexts, when 30 years ago it was only 20% (TORRES, 2011). This phenomenon has led to entire families of small and medium producers and intermediaries being excluded from marketing channels, forcing them to sell their production to large intermediaries and reducing their ability to negotiate. On the other hand, according to ETC Group (2017), "On a global scale, more than 80% of small producers operate in local and national food markets"; that is, many of the foods consumed in non-rural areas circulate through short local and/or regional circuits, highlighting one of the most important challenges for urban contexts in terms of food distribution and marketing.

Compared to the production stage, in Mexico 80% of the producers with agro-ecological processes are "small producers", that is, they have less than two hectares; of these, more than 80% are indigenous producers (GÓMEZ; GÓMEZ, 2017, p. 34). If we consider that agro-ecological production comes from traditional production processes, there is an important opportunity to generate, recover and reclaim traditional practices and knowledge around food production by small-scale farmers.

However, one of the main obstacles for small and medium producers is the link with markets to

commercialize their surpluses. This is where the promotion of markets and alternative marketing channels becomes important as a bridge and promotion between the different stages of the production process, and particularly between agro-ecological production and urban consumers, thus constituting one of the main strategies for achieving the scaling up of agro-ecology (MIER Y TERÁN *et al.*, 2018; ROSSET; ALTIERI, 2019).

In this regard, it is essential to explore fairer forms of exchange that make small-scale producers visible, raise awareness among consumers and disrupt exchange relationships through SSE processes, in order to build broader scenarios for farmers, consumers, agro-ecology, food and local food systems in general.

2.1 Agro-ecological markets, alternatives to the conventional market

Agro-ecological markets are places of material and symbolic exchange where different social actors converge who are interested in agro-ecological processes to different degrees and under different names, as some can define themselves as organic, sustainable, ecological, green, etc. They are considered alternative, since they act in ways that are different from those of profit and capitalist commercialization and highlight symbolic and political elements that are ecologically and socially responsible. The alternative refers to the intention of promoting other forms of market that respond to problems such as the exclusion and marginalization of farmers, the possibility of appropriately selling the harvested surplus, the need to produce without risking our health and that of the land, and the importance of generating spaces for social coexistence and solidarity that gives new meaning to money-commodity transactions, among other challenges. It is from the moment of the search for an alternative that these initiatives are framed in processes of transformation of agri-food systems, which are in the process of homogenizing in the face of the imposition of a hegemonic system (MCMICHAEL, 2009; PLOEG, 2010; PATEL, 2007), and against which, multiple movements are proposing food sovereignty, agro-ecology and SSE as new references and practices to change the prevailing course.

Another aspect of differentiation is the conception of market, which includes generating relationships that go beyond the instrumentality or commercialization of life and recognizing markets as systemic spaces of socio-political linkages where our relations with nature and our economic relations are defined. Thus, markets are conceived in their complexity and in their social logic, as spaces for

the reproduction of life and therefore of the community or society in which we live (GRANOVETTER, 1985; 1992). In these experiences there is sociability as a currency of exchange, which has no value assigned in the logic of capital reproduction, nor of money, but it is what gives meaning, or a shared social value, to production, processing, commercialization, food, intermediation, organization; which are recreated in these spaces of exchange, of food, knowledge and taste, as a social and solidarity economy.

Also, the conception of markets as spaces for the articulation of the changing potential that implies seeing the market in its systemic functioning, in being spaces of social, cultural, economic, political and ecological relations. Specifically, it must be recognized that the spaces for trade and exchange of food are interrelated, and that markets as physical spaces, and as means for exchange, are diverse and have a presence from the field to the table, in our lives and back to the land. These types of spaces are not reduced to a market, or a marketing channel, or the sale of some merchandise, they are meeting places for multiple projects and visions, both individual and collective (GARCÍA-BUSTAMANTE, 2015). Therefore, in order to understand the dynamism of these markets, which challenge the hegemonic system, one must consider the diversity of actors involved, the lives that are woven, the territories in which they are rooted, the multiplicity of interactions and exchange modalities and conceive them as processes that change in their search for alternatives. Thus, their changing potential can be recognized in their wider existence, of socio-economic linkage, of community and territory building and of daily reproduction of beings, lives and thoughts. As some examples we present the following experiences.

3 METHODOLOGY

This work is the result of different research projects carried out by Colegio de la Frontera Sur (ECOSUR), Universidad Autónoma de Chapingo (UACH), Universidad Iberoamericana Puebla and Benemérita Universidad Autónoma de Puebla (BUAP). These projects were carried out over a period from 2011 to 2020. Initially, markets were selected and identified at random, also known as *tianguis*, located in the states of Puebla, Quintana Roo, San Luis Potosí, and State of Mexico, which are in central and southern Mexico.

In a second phase, visits were made to the markets, using participant observation and interviews, which made it possible to identify key actors, such as: producers,

market managers and consumers; who were interviewed in depth in order to investigate the characteristics of the markets, challenges and virtues such as experiences for the exchange of healthy food, the consolidation of marketing channels, the recovery of physical and symbolic spaces for the exchange of products, discussions, strategies and their connections.

Subsequently, the information and discussions were systematized within the various universities. Finally, these results and experiences were presented and discussed at different times, one of the main ones being the first Mexican agro-ecology congress. This collective reflection made it possible to identify the points of agreement among the different experiences in terms of progress, experiences, challenges, and the role of the intermediation process in the markets, using solidarity economy and responsible consumption as a framework.

4 EXPERIENCES OF SOLIDARITY ECONOMY AND RESPONSIBLE CONSUMPTION IN MEXICO

4.1 Chapingo Organic Tianguis

The Chapingo Organic *Tianguis* was founded on November 15, 2003 with the vision of being a means to promote local organic agriculture in the Eastern Region of the State of Mexico, to offer healthy food to consumers and provide alternatives to farmers for marketing in an alternative and differentiated market scheme; with the mission of establishing a space for linkage and connection with the Universidad Autónoma de Chapingo. The Chapingo Organic *Tianguis* (TOCh) is composed of 29 families of producers and is part of the Mexican Network of *Tianguis* and Organic Markets (REDAC).

The *tianguis* reflect processes (individual that transit to the collective) that attempt the construction of social power, by means of projects that are shared: “The construction of social power begins in the family, in the construction of a self-sufficient, safe and healthy home, that shares with many others the same domestic micro-policy” (TOLEDO, 2014 apud GARCÍA-BUSTAMANTE, 2015, p. 181).

Within the TOCh, the generation of short commercial circuits is facilitated, one of the modalities of ecological economy; important efforts have been made for the diversification of the production to offer the basic food basket with healthy, clean, traditional and tastier food, where the solidarity economy, the culture, the healthy

coexistence, the learning workshops are promoted, with the participation of several generations of producers (children, grandchildren and grandparents). It is a space where producers find their basic sustenance for their food security and sovereignty, generating economic resources for their maintenance by making use of their traditional knowledge and new agro-ecological techniques.

TOCh producers report a higher quality of life since their incorporation into the market, while consumers clearly differentiate that going to the *tianguis* is more than a shopping experience, since they have managed to establish relationships of trust and friendship with producers, and understand the challenges faced by the farmer for their production. It is a successful experience of solidarity economy that values who, how and why is produced in an agro-ecological way.

Among the successes of this initiative is that weekly, and as of 2017, in addition to food, free workshops are offered twice a week on topics related to health, cooking, agro-ecological forms of production, as well as cultural and musical activities and food exhibitions. The participants' plots are small and bio-diverse with a multiple use of agro-ecological techniques, among them composting, soil conservation practices, use of native seeds, clear separation with conventional plots, and a collective participatory certification system involving producers, consumers and researchers from the UACH who give certainty that what is offered are organic products (being a model contrary to the producer-certifier-exporter). In this space, more than a thousand foods are offered weekly, being one of the first initiatives in the country to bring agro-ecological foods directly to the consumer. The TOCh is part of the first experiences that gave rise to the Mexican Network of *Tianguis* and Organic Markets that has promoted the development of dozens of initiatives of *tianguis* in the Mexican organic and alternative market.

Among the challenges is the need to meet the growing demand for products by the more than 500 families who visit the market each week; differentiate themselves from the neighboring alternative market; and achieve the complete empowerment of producers in their processes. The Chapingo Organic *Tianguis* connects the production of small and medium agro-ecological producers with reflective consumers, in the search for collective actions of citizen resistance, post-material values, and a better quality of life for all, with the vision of building up “from below” communities that tend towards good living.

4.2 The Puebla Alternative Tianguis Puebla

The Puebla Alternative *Tianguis* (TAP), emerged from the initiative of several young graduates of the Universidad Iberoamericana and the Universidad de las Americas, both in Puebla. The beginnings of the *tianguis* in 2006 were inspired by the results of a master's thesis¹ in which organic producers in the State were identified. Later, from diverse conversations and meetings, the collective "Tlajke Nawake" was formed (close and together in Nahuatl language) with which the steps to create the TAP began, in the creation and consolidation of which the participation and exchange of experiences with other similar processes gathered in the Mexican Network of *Tianguis* and Organic Markets (REDAC) was significant.

In November 2006, with the objective of inviting them to participate in an alternative commercialization space within the city, a producers' forum was organized with the support of the Universidad Iberoamericana Puebla and the REDAC. This space allowed producers to get to know each other, share their problems, interests, and motivations, and learn about the proposal in order to create links of action. From then on, some local organizations interested in participating in the creation of a local *tianguis* began to connect with each other, among them Quali and some producers from the Vicente Guerrero organization. At the same time, the REDAC continued to support training in certification processes and linkages with other producer organizations at the regional level.

On July 21, 2007, the first day of the Puebla Alternative *Tianguis* was held with three groups of producers, a dozen consumers and a workshop. Later in 2008, with the help of the Tosepan Titataniske Cooperative, the Canadian foundation Falls Brook Centre, along with REDAC, it was able to improve the infrastructure of the *tianguis* and consolidate the first face-to-face meetings in a stable manner. In the 12 years of its existence, different representatives of family agriculture, cooperatives, and family enterprises, among others, have participated in the *tianguis*, some constantly and others a bit more intermittently. Likewise, alliances have been made with producers in the market of Tlaxcala and Morelos who sporadically go to sell their products.

¹"Analysis for the establishment of a producer-consumer solidarity system for products with environmental and social advantages in the city of Puebla: fair trade and organic agriculture", García Bustamante Rocío (2006) Universidad Iberoamericana Puebla Thesis for the Master's degree in Regional Studies in Environment and Development, Puebla, Puebla, Mexico.

As part of the TAP's strategies to attract new participants — producers and consumers — various activities and events are regularly held for different audiences, including children and the elderly, thus creating a participatory and supportive environment. Perhaps one of the most important achievements of this space has been the possibility of constituting and maintaining over time the participatory certification committee, which since 2007 has been integrated by producers, promoters, and consumers of the *tianguis*.

In 2016, TAP made a partnership with "Sembrarte" Association, who promote urban agriculture and have a demonstration orchard in the south of the city. In the same year, the *tianguis* moved to the Association's facilities. With the union of the two projects, the *Tianguis* was reinforced with the part of formation and training of agriculture, demonstrating in this way the importance of generating links and connections between complementary projects.

Likewise, this exchange point has allowed the integration of small producers at a regional level, who exchange, learn, organize, and work under the values of sustainable production and equitable and solidarity-based exchanges. This process has favored the creation and constitution of a Participatory Certification System that guarantees the quality and transparency of the productive processes to the consumers.

At the same time, the Puebla Alternative *Tianguis* has become a system of regional purchase and sale of local and organic products, constituting a short circuit understood as the participation of zero to one intermediary (CHIFFOLEAU, 2012).

In this alternative marketing system, producers have been able to diversify their sales, either by direct sales in the same *tianguis*, or by having access to other marketing channels such as stores, restaurants, shopping baskets, and small specialized spaces, constituting alternative marketing channels.

4.3 Macuilli Teotzin Natural Products Market. San Luis Potosí

The Macuilli Teotzin market is located in the capital of the state of San Luis Potosí. This city is characterized by the presence of different industries that seek to take advantage of its location among the three most important cities in the country — Mexico City, Guadalajara, and Monterrey. This phenomenon has resulted in agricultural production not having the importance it deserves and producers having to move to the city in search of income in

the capital's industrial zone, joining the ranks of workers that make up the automotive industry, the state's main source of income.

In this context, the possibility of consolidating a marketing space that favors small and medium producers becomes important. Thus, the Macuilli Teotzin, from various meetings held with producers in the region as part of a project of alternative farmer training, which generated a space called "Schools of Field and Experimentation for Farmers", with the participation of various academic institutions, among those, the Universidad Autónoma de San Luis Potosí (UASLP) and the Universidad Autónoma Chapingo. At these meetings, one of the main conclusions and concerns expressed by the producers was the lack of favorable marketing opportunities in which to offer their products, in addition to the high level of intermediation to which they were subjected.

As of 2011, as a result of the interest of professors and students of the agro-ecology degree of the agronomy and veterinary faculty of the UASLP, a marketing space began to be designed to promote the production processes of small farmers and indigenous people in the region. This commercialization process was transformed into a civil association, with a very clear objective: to stimulate organic production based on agro-ecological principles and the integration of small and medium producers in the region. During the formation stage, they had the support of REDAC, from which progress was made in organic production processes, which this market has taken up again and seeks to consolidate as a differentiating element from other similar experiences.

The market has gone through different stages that have been marked by the uncertainty generated by not having a venue of their own, having to change the place of the face-to-face meetings repeatedly. In the last stage, the Faculty of Habitat of the UASLP, has provided a venue that guarantees the realization of the meetings once a month, achieving in this way to strengthen a group of producers and consumers frequent but limited by the supply and capacity of the venue in which they are located. As of August 2017, markets are held in the city of Matehuala, also with the support of the UASLP through the Academic Coordination Altiplano Region.

The organizational structure is characterized by the regional division of its participants — Plateau, Huasteca and Center — who make up committees where information circulates and messages, agreements and proposals are transmitted. For this purpose, there is a board of directors made up of producers, who are accompanied by members

of the academic community. However, decisions are made by the participants — mainly producers and consumers. There are two ways to make decisions, one regional and one extended, the first is after each market day, where regional producers meet and make the evaluation of the market and then communicate to the other two regions, in this way information circulates. The other form is the extended assembly that takes place once a year —due to the lack of resources to carry it out more frequently—, where decisions are made regarding the calendar, activities and commitments assumed by each region.

4.4 The Mayab Tianguis. Cancún, Quintana Roo

This *Tianguis* emerged as an initiative of the academic community of the Universidad del Caribe, from the work of researchers belonging to the Department of Human Development, Sustainable Tourism and Gastronomy and Hospitality, and more precisely from a research project entitled "The sustainable food culture at the Universidad del Caribe". As a result of this project, some of the environmental and socioeconomic problems experienced by the Mayan communities in the state of Quintana Roo were identified.

Previously, since 2007, the National Commission of Natural Protected Areas (CONANP) had been carrying out training and accompaniment processes for rural and indigenous producers in the region, in search of the transition to organic production practices, initially motivated by the possibility of exporting their products, particularly honey. Based on this work and the possibility of integrating producers into a marketing process, with the support of the Universidad del Caribe, the first Mayab *Tianguis* was held at the University's facilities in 2011.

This project posed several challenges for the producers, mainly because of the quality of the soil in the region, which among other characteristics has truly little depth for planting, is a rocky, calcareous soil with few nutrients. Therefore, the way to transform these conditions was based on the implementation of agro-ecological practices that allowed soil regeneration, crop rotation, row, or trench cultivation, among other strategies. It should be mentioned that the process was characterized by encouraging the recovery of traditional practices and knowledge, rather than the implementation of practices that were foreign to their contexts.

Initially, the market included the participation of the communities of Nuevo Durango and Nuevo Yokdzonot; over time, producers and processors linked to urban agriculture processes, handcrafted products, seeds,

among others, from the city of Cancun or some nearby communities, have joined the market. However, there is a disconnect between different regional experiences. It has been possible to maintain an important presence of Mayan producers who offer traditional products such as *papa voladora*, *macal*, *chaya*, *hierba santa*, *miami*, among others. In addition to diverse handcrafted products for plague control, fertilizers and natural preparations to nourish the grounds.

4.5 The Agro-ecological Tianguis of José María Morelos. José María Morelos, Quintana Roo

The Agro-ecological *Tianguis* of José María Morelos is perhaps the most incipient experience presented here. It is located in the municipal capital of José María Morelos, in the interior of the state of Quintana Roo, surrounded by the main tourist hubs of the country: Cancun (300 km), Playa del Carmen (238 km) and Tulum (174 km), and 200 km from the state capital, Chetumal. It is the only municipality in the state that does not have a coast, therefore, while in the rest of the state tourism has been an important source of income, in the case of José María Morelos, there has been a recurring migration of young people and adult men mainly to these tourist hubs in search of income. This phenomenon has meant, on the one hand, the abandonment of agricultural activities in production units far from the urban center of the communities of the municipality, but on the other hand, it has generated processes of home-made orchards that have been stimulated mainly by women, who have integrated this *tianguis* since its creation.

In this context, the Universidad Intercultural Maya de Quintana Roo (UIMQROO), since 2012, designed the project “Food Security and Sovereignty”, in which the main objective was to strengthen the family orchards in the communities surrounding José María Morelos to guarantee the production and consumption of the families. Subsequently, by identifying some communities where the project was succeeding, surpluses began to be generated in production, which allowed the process to be scaled up towards commercialization. It is there where the proposal to generate a commercialization space takes shape within the UIMQROO community.

In 2013 the first *tianguis* is held and from then on it has been held once a month. Like the other experiences, the venue has been a challenge for the consolidation of the process, initially they were installed in a place far from the center of the city, which did not allow the flow of people. Later they reached an agreement with the local authorities

for the use of the space in the central square, however its use is limited to the days when there were no events scheduled. This has led to rethinking its location and moving it to the university’s facilities, as well as seeking new marketing channels, positioning some products, mainly vegetables, in a local store owned by UIMQROO alumni, in addition to the design of a program of weekly baskets for consumption by teachers and administrators of the university.

In this *Tianguis*, it is necessary to mention that although the commercialization process has not been consolidated, despite existing for more than five years, the great virtue of this process is in the strengthening of food sovereignty as a key element within the participating communities. Therefore, although its impact at the local and regional level is not perceived, the initial objectives of the project are reflected in the possibility of self-sufficiency of the communities and increase of production units, thus achieving an improvement in family income and in some cases avoiding the migration to tourist areas in search of employment.

5 LEARNING FROM AGRO-ECOLOGICAL MARKETS

From the experiences analyzed and the trajectories that each one has been building, it is possible to identify aspects for analysis around the development of each experience and the learning processes that have strengthened their actions, which we mention below:

5.1 Agro-ecological markets as social processes that give new meaning to the market

This type of market has the possibility of claiming some of the virtues offered by the economic exchanges that take place in different spaces, both because of the type of products offered there and because of the type of actors involved, their motivations and forms of participation (ROLDÁN-RUEDA *et al.*, 2016). In this sense, these markets are evidence that other types of economic relations and exchanges, less concentrated, more inclusive, better paid, more supportive, are not only possible, but have materialized in different Latin American contexts. According to León, Valdés and Vásquez (2003, p. 73):

When we talk about markets, we generally refer to economic transactions, their intrinsic characteristic; however, talking about markets also implies referring to a social, cultural and identity world built in everyday life and by the diversity of its protagonists. It supposes the encounter and exchange of “ways of life” among its actors.

These types of spaces have been recovering physical and symbolic scenarios that allow the design and implementation of diverse strategies that seek, on the one hand, to question the hegemonic market, and on the other, to solve concrete problems of the contexts in which they are located. In this regard, it is necessary to mention that although these experiences face common problems in each of the stages of the productive process, they are resolved in different ways, based on the trajectories, resources, expectations and links that are created among the participants.

In that sense, these experiences become references to show the capacity of these markets to face some of these common problems identified by their producers and promoters, among which we highlight the intermediation processes and the certification mechanisms as two of the problems in which the participants of these experiences have been generating proposals and alternatives, which are articulated in different ways with other ways of doing and thinking the economy, as well as with the implementation of more social and solidarity-based productive processes.

5.2 Development of social economy and responsible consumption processes

Solidarity Economy seeks to reconstitute economic relations in the face of the logic of capital (SINGER, 2002; CORAGGIO, 2014), an example of which are the agro-ecological markets, since the different actors who participate in them establish relations of proximity that allow them to link up and establish bonds of trust and cooperation, not only for commercial exchange, but in production, distribution, and consumption itself. Agro-ecological markets stimulate solidarity economy processes by proposing particular ways of producing, distributing, transforming, commercializing and consuming in order to contribute to an extended reproduction of life, understood as the “sustained development of the quality of life of its members and that promotes the development of fairer economic relations” (CORAGGIO, 2007, p. 3); They also seek to become “sustainable socio-economic strategies that aim at a relevant horizon in view of the structural crisis of salaried work” (GRACIA, 2015, p. 18). These markets are considered processes of solidarity economy by putting at the center the person, work, collective organization, the transformation of social relations among its participating actors, as well as the use of different forms of exchange beyond the market.

Likewise, in the markets converge productive projects that involve the exchange of knowledge and agro-ecological processes, as well as collective work, which the

clearest example is the participatory certification, because it involves producers, who exchange knowledge, information, and production techniques, but also consumers and solidarity intermediaries, who get involved and learn from the production processes. The same happens in the processes of intermediation, socialization, and creation of links around agro-ecological production and exchanges. This makes the different actors in the production chain visible and triggers socialization dynamics and has even led to an expansion of agro-ecological production processes at the territorial level.

In these spaces, food takes on a use value and the agro-ecological production and exchange processes become politicized, since they allow various subjects involved to acquire discourses and practices that go beyond mere commercial exchange, where care for nature, the use of agrochemicals, healthy eating, relations of proximity and reciprocity imprint a different logic to the socio-commercial relations of these markets.

This type of process finds an echo in citizens who are looking for consumption options based on ethical, environmental, bio-cultural, health and/or solidarity values, which guide their purchase decisions, thus politicizing consumption, making them responsible, informed, and aware consumers.

5.3 Participatory Certification Processes (PC)

The PC is a collective process between producers, consumers, and other actors, which guarantees the organic and healthy quality of local products, generated on a small scale, based on relationships of trust and that promote commitments to health, ecology, equity and precaution (REDAC, 2008 apud GÓMEZ *et al.*, 2019, p. 520).

PC differs from agency certification because it meets organic standards, maintains simple verification procedures, seeks to reduce bureaucracy and costs, and usually includes an educational and social control process that involves production chain actors (producers, intermediaries, and consumers). In addition, the PC normally has no direct cost to the producer, has different characteristics from the Internal Control Systems that are part of agency certification, and does not aim to export food (GÓMEZ, 2006, p. 3).

In the PC, the collaboration of each one of the participants is vital, allowing them to explore and learn about aspects of the productive processes that go beyond their role as economic agents from the role of producer, intermediary or consumer. In this sense, the certification processes enable the possibility of constituting social actors with the capacity to influence production, distribution and consumption. For

this, within this type of market, accompanying visits are carried out, generally integrated by producers, consumers, promoters and people linked to the academy, giving rise to the exchange of experiences, technical advice and direct training; being a learning alternative for each of the participants in favor of the transformation of the productive processes and the exchange relationships that take place there, reaffirming ties and bonds of trust, solidarity and respect.

“Sometimes we don’t make visits to make sure of the production of our partners, we know them and trust them, or someone who knows them, we know how they work their production, in the organic sector it is very much based on trust, in this type of market” (Puebla Alternative Tianguis Producer, June 2017)

Among the experiences we have mentioned, PC processes have been implemented based on agreements, trajectories, interests, and diverse motivations. In this sense, even though they have a common objective, the contexts in which they are situated, the type of participants and the common interests they identify allow recognizing aspects that influence the configuration of the certification processes. One of the most controversial aspects has to do with the validation of the certification processes by the corresponding authorities (SEDAR - SENASICA). For some promoters, the possibility of consolidating the PC process within the legal frameworks became a challenge and evidence that the government is taking steps towards the inclusion of small and medium producers in the design of public policies. However, its inclusion in the law and its subsequent implementation aims at the homogenization of the production processes, downplaying the importance of the social, political and economic particularities of each context and of each producer. Thus, the trust generated in these participatory certifications does not lie in the legal recognition, but in the relationship that is formed between the multiple participants and their own experiences when they get involved.

“You can have your certification, but then you can do whatever you want, so it really is based on trust and the clients realize, they realize that it tastes different. Now, it does not have to be small or ugly, if you produce it well you produce quality” (Puebla Alternative Tianguis Producer, June 2017)

Despite the challenges of participatory certification, these processes represent the possibility of recognizing multiple responses to common consumer concerns and

interests, the possibility of recovering traditional practices, knowledge and know-how, rebuilding relationships and links among participants, giving new meaning and exploring other types of exchanges, transforming consumer decisions based on more and better information, in collective benefits and above all in the inclusion of values and principles that allow the consolidation of this type of commercialization spaces as a real alternative for producers, intermediaries and consumers. In this way, the PC processes become a bridge to create and strengthen the relationships between producers, managers and consumers that can strengthen the processes of responsible and informed consumption because they constitute processes of transparency and trust.

5.4 Intermediation processes

Intermediation, understood as the link between producers and consumers, represents one of the greatest problems for producers. Access to marketing spaces, access routes from production units, distances, access to their own vehicles, the age of the producers, the absence of generational relay processes, as well as the presence of “usurious” intermediaries, among other aspects, are some of the main obstacles to production. In this sense, the urgency to demand and transform intermediation makes sense to some of the participants in these markets, to the extent that they identify in this stage of the productive process, the opportunity to recover the link that has been co-opted by a few hands (ROLDÁN-RUEDA; GRACIA, 2018).

Within this scenario, some strategies are identified that seek mechanisms for the transformation of intermediation processes. One of the priorities, in the search for strategies, has been focused on the need to diversify marketing channels, for which the flow of information among participants, the strengthening of local markets and the staging of intermediation take on an important role. To this end, some of these markets have successfully integrated intermediaries — who are generally also producers — who perform functions that go beyond collecting producers’ surpluses.

At the same time, other markets privilege direct exchanges as a mechanism to ensure that producers achieve greater benefits, but for some of the aspects mentioned above, this can become an obstacle to their participation. In this regard, the transformation of intermediation processes implies recognizing that producers cannot always take charge of planting, caring for, harvesting, transporting, and selling products.

Therefore, to assess the effects on the democratization of agri-food systems, it is essential to identify the terms of trade they build and the type of market they generate (SOLER; CALLE, 2010), since the existence of trade in differentiated products does not necessarily imply the transformation of the conventional market. It has even been observed, on occasion, that the dynamics in certain distribution channels reproduce practices that strengthen unequal global structures generated around consumer elites, discursive practices associated with social and environmental justice based on a “game of labels” —fair trade and environmentally responsible, good supplier practices— and certifications —organic, green or sustainable—, in addition to the market niches constituted by the false solutions of the green economy (ROSSET, 2016) that do not question or transform these structures.

Considering the above, it is important that in the formation of agro-ecological markets, territorial and productive complementarities are stimulated that transcend economic rationality and include fairer and more supportive relationships among participants, promoting responsible and informed consumption. The creation of links between local and regional actors is a step in this direction, since it broadens the concept of food distribution and related markets. The recovery of physical and symbolic spaces linked to food distribution, which carry out this type of experience, implies changes in the logics and dynamics that configure agri-food systems (CALLE *et al.*, 2009). At the same time, it raises questions about recurrent categories and discourses — direct exchanges, fair prices, fixed prices, fair trade, among others — that are crucial to question and propose transformations in the face of the neo-liberal model (NICHOLSON, 2013) and the apparent efforts to eradicate the problems of market liberalization that marginalizes and denies the rural population.

5.5 Challenges of alternative markets

Despite the progress made and the lessons learned from these markets, there are challenges that must be addressed in order to strengthen agro-ecological markets and thus increase their influence. That is why we are presenting some proposals for carrying out this task:

a) Increased training to improve production processes

Most of the producers in the markets are small farmers with areas of less than 2 ha, in some cases the productivity of these areas is low, so they could produce more with the improvement of the agro-ecological technology applied.

In addition, other important aspects could be improved, such as safety, the correct application of agro-ecological principles, the improvement of transformation processes and the generation of greater added value, among others.

b) Maintain and improve participatory certification processes

The trust that has been generated with consumers must be taken care of, which is an essential requirement in a process of solidarity economy. It must be guaranteed that the products in these spaces are indeed healthy and agro-ecological.

c) Generate product price review processes

It is known that the prices offered in local agro-ecological markets are lower than those in supermarkets and specialized organic product stores; however, in some of the markets the prices of the products have been gradually increasing and there is no process for reviewing the real costs of production within the markets. It would be extremely valuable to make progress in accounting for real costs to explain to consumers the reasons for the costs of products and establish strategies (e.g., increasing productivity, generating added value) that will lead to a reduction in product prices and thus promote the widespread of consumption processes and knowledge of agro-ecological products.

d) Mechanisms for the exchange of knowledge between local markets

An interaction between the different local markets is required, in such a way that processes of knowledge exchange are re-established, so that the strategies that work best can be replicated by the new markets, the different expertise that we have are shared, product exchange.

e) Influence the country's public policy for the promotion of local agro-ecological markets

It is important that these organized initiatives influence a new public policy to promote an agro-ecological agri-food system in Mexico. Several Mexican government agencies in 2019 (SADER in the sub-secretariat of food self-sufficiency, and SEMARNAT in the General Directorate of Agro-ecology) have made proposals that take up the science, practice, and movement of agro-ecology, but the dynamic and connecting role of civil society and producers in local markets is not clearly visualized.

6 CONCLUSIONS

Agro-ecological markets are reconfigured with social and solidarity economy dynamics, promoting collective actions, agro-ecological processes, in a country-city conversation that re-constructs the function of markets, politicizes exchanges, establishes bonds of trust, highlights the use value of food, gives new meaning, and allows interaction among different social actors and favors the emergence in Mexico of a new sustainable agri-food system.

These spaces could constitute a platform to give new meaning to trade and exchange relations. They are spaces where their participants manage to identify common-shared motives, interests, and concerns, related to health, ethics, food, solidarity, bio-culture and the collective, favoring links between the countryside and the city.

The markets studied are heterogeneous and their characteristics are given by the territory, however, they share the learnings and challenges. In these spaces, family and collective businesses are encouraged to place their products in a fairer and more diverse manner, because by participating in them, producers expand and diversify their marketing channels.

It has been identified that these spaces allow the exchange of knowledge and therefore of productive practices, giving weight to agro-ecological processes that can have a positive impact on the territories. Within the different experiences there are meeting points that revolve around the transformation of the productive processes that allow thinking about agro-ecology as a viable and necessary alternative to contain the environmental, social, and political deterioration that has developed around food sectors. This leads to agro-ecology being an opportunity to recover physical and symbolic spaces that are not exhausted in productive practices, but on the contrary, points to the re-articulation of multiple social subjects, protagonists in alternative agri-food systems and social and solidarity economy.

Intermediation and participatory certification processes provide elements for the strengthening of relations between producers, consumers, and managers, creating a fertile field for the practice of responsible consumption.

Participatory certification is a process where trust, values, and collective learning (exchange of knowledge) prevail among the different actors participating in alternative markets, which promotes the empowerment of producers over their production processes and favors the development of agro-ecology in their production units, as an alternative model of production and consumption.

The strategies that are deployed in alternative markets are diverse and complex, the achievements move towards local food systems that are different from the hegemonic one. In this sense, we consider that it is not possible, or at least not forcefully so, to create alternative spaces without having a political and ideological stance towards the problems and realities that farmers in different regions must face, without questioning the agri-food model, without investigating the forms of production, without transforming diets, relations and links between the countryside and the city, and without shifting the focus to rural territories that supply cities.

7 REFERENCES

- CALLE, A.; SOLER, M.; VARA, I. La desafección al sistema agroalimentario: ciudadanía y redes sociales. In: Congreso Español de Sociología de la Alimentación, 1., 2009, Gijón. Disponível em: < <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.683.7217&rep=rep1&type=pdf> >. Acesso em: 03 de julho de 2019.
- CEPAL; FAO; IICA. Fomento de circuitos cortos como alternativa para la promoción de la agricultura familiar. **Boletín CEPAL/FAO/IICA**, v. 2, p. 14, 2014.
- CHIFFOLEAU, Y. Circuits courts alimentaires, dynamiques relationnelles et lutte contre l'exclusion en agriculture. **Économie Rurale**, n. 332, p. 88-101, nov./dec. 2012.
- CORAGGIO, J. L. Desarrollo regional, espacio local y economía social. In: **Seminario Internacional Las Regiones Del Siglo XXI Entre La Globalización y La Democracia Local**, 1., 2005. México, 2007.
- CORAGGIO, J. L. **Economía social y solidaria**: El trabajo antes que el capital. Quito: Ediciones Abya-Yala, 2011.
- ETC GROUP. **¿Quien nos alimentara?** La red campesina alimentaria o la cadena agroindustrial. 2017. Disponível em: < https://www.etcgroup.org/es/quien_alimentara >. Acesso em: 10 de novembro 2019.
- FAO. Comisión de recursos genéticos para la alimentación y la agricultura. **Segundo informe del estado de los recursos fitogenéticos para la alimentación y la agricultura en el mundo**. 2010. Disponível em: < <http://www.fao.org/3/i1500s/i1500s.pdf> >. Acesso em: 03 de julho 2019.

- GARCÍA-BUSTAMANTE, R. Búsquedas de posibilidades de vida desde el presente: Los Tianguis Alternativos Locales en México. In: GRACIA, M. A. (coord.). **Trabajo, reciprocidad y re-producción de la vida**: experiencias colectivas de autogestión y economía solidaria en América Latina. Miño y Dávila: Buenos Aires, 2015. p. 281-284.
- GARCÍA-BUSTAMANTE, R. (2015). **Tianguis Alternativos Locales en México como puntos de encuentro micropolítico**: en la búsqueda de posibilidades de vida en el presente. 2015. 277 p. Tese de Doutorado – Doctora en economía política del desarrollo, Benemérita Universidad Autónoma de Puebla, Puebla, 2015.
- GARCÍA-BUSTAMANTE, R.; GRACIA, M. A. Nodos, actores y discursos en la generación de alternativas alimentarias locales en Quintana Roo y Yucatán, México, 2016-2016. **Intersticios Socialesociales**, n. 17, p. 175–202, 2019.
- GARCÍA-BUSTAMANTE, R.; RAPPO, M. S.; TEMPLE, D. Innovaciones socioambientales en el sistema agroalimentario de México: Los mercados Locales Alternativos (Tianguis). **Agroalimentaria**, v. 22, n. 43, p. 103–117, 2016.
- GRACIA, A. **Trabajo, reciprocidad y re-producción de la vida**: experiencias colectivas de autogestión y economía solidaria en América Latina. Miño y Dávila: Buenos Aires, 2015.
- GÓMEZ-TOVAR, L.; RODRÍGUEZ-SILVA, R. C.; GÓMEZ-CRUZ, M. La certificación orgánica participativa en el tianguis orgánico Chapingo, México: avances y retos desde la mirada de la agroecología. In: BARKIN, D.; CARRILLO, G. (Coords.). **Ecological Economics and Social-Ecological Movements**: Science, policy and challenges to global processes in a troubled world. Ciudad de México: Universidad Autónoma Metropolitana, 2019. p. 519-534.
- GÓMEZ-TOVAR, L. Una certificación diferente: La certificación orgánica participativa. 2006. Disponível em: < https://vinculando.org/organicos/certificacion_organica_participativa.html >. Acesso em: 05 de junho 2019.
- GÓMEZ-TOVAR, L. GÓMEZ-CRUZ, M. Á. **Agricultura orgánica**: Bases técnicas. Centro de Investigaciones Interdisciplinarias para el Desarrollo Rural Integral. Chapingo: CIIDRI; Universidad Autónoma Chapingo, 2017.
- GRANOVETTER, M. Economic Action and Social Structure: The Problem of Embeddedness. **The American Journal of Sociology**, v. 91, n. 3, p. 481–510, 1985.
- GRANOVETTER, M. Economic institutions as social constructions: a framework for analysis. **Acta Sociológica**, v. 35, n. 1, p. 3-11, 1992.
- LEÓN, G.; VALDÉS, H.; VÁSQUEZ, V. **Mercado Kantuta**: Un Mercado Campesino. Fundación PIEB: Murillo, 2003.
- MIER Y TERÁN GIMÉNEZ CACHO, M. *et al.* Bringing agroecology to scale: Key drivers and emblematic cases. **Agroecology and Sustainable Food Systems**, v. 42, n. 6, p. 637-665, 2018.
- MCMICHAEL, P. A food regime genealogy. **Journal of Peasant Studies**, v. 36, n. 1, p. 139-169, 2009.
- NICHOLSON, P. Soberanía alimentaria: Alianzas y transformaciones. In: HOLT-GIMÉNEZ, E. (ed.). **¡Movimientos alimentarios uníos!** Estrategias para transformar nuestros sistemas alimentarios. Bogotá: ILSA-Food First, 2013. p. 40-48.
- PATEL, R. **Stuffed and Starved**: The Hidden Battle for the World's Food System. London: Portobello Books, 2007.
- PÉREZ, J. C.; ETXEZARRETA, E.; GURIDI, L. ¿De qué hablamos cuando hablamos de Economía Social y Solidaria? Concepto y nociones afines. In: JORNADAS DE ECONOMÍA CRÍTICA, 11. 2008, Bilbao. **Presentación**, Bilbao. Publicado por Asociación de Economía Crítica, 2008, p. 1-26.
- QUIJANO, A. ¿Sistemas alternativos de producción? In: SANTOS, B. S. (coord.). **Producir para vivir**: Los caminos de la producción no capitalista. México, D.F.: Fondo de Cultura Económica, 2001. p. 406.
- ROLDÁN-RUEDA, H. N.; GRACIA, M. A.; SANTANA, M. E.; HORBATH, J. E. Los mercados orgánicos en México como escenarios de construcción social de alternativas. **POLIS. Revista Latinoamericana**, n. 43, 2016.
- ROLDÁN-RUEDA, H. N.; GRACIA, M. A. (Des) estigmatizar la intermediación de alimentos en pos de mayor equidad: Espacios emergentes de comercialización frente a la gran distribución en Colombia. **Espacialidades**, v. 8, n. 2, p. 104-125, 2018.

ROLDÁN-RUEDA, H. N.; GRACIA, M. A.; MIER Y TERÁN, M. Los mercados locales alternativos en México y Colombia: resistencias y transformaciones en torno a procesos de certificación. **Cuadernos de Desarrollo Rural**, v. 15 n. 82, p. 1-17, 2018.

ROSSET, P. M. La reforma agraria, la tierra y el territorio: evolución del pensamiento de La Vía Campesina. **Mundo agrario**, v. 17, n. 35, 2016.

ROSSET, P.; ALTIERI, M. **Agroecología: ciencia y política**. Ciudad de México: Universidad Autónoma de Zacatecas; Miguel Ángel, 2019.

SEMARNAT - Secretaría de Medio Ambiente y Recursos Naturales. **Informe de la situación del Medio ambiente en México**. Compendio de estadísticas ambientales. Indicadores clave de desempeño ambiental y de crecimiento verde. 2016. Disponible em: <https://apps1.semarnat.gob.mx:8443/dgeia/informe15/tema/pdf/Informe15_completo.pdf>. Acceso em: 17 de novembro 2019.

SIAP. Boletín mensual. **Balanza de disponibilidad - consumo**. 2017. Disponible em: <https://www.gob.mx/siap/documentos/balanzas-disponibilidad-consumo-de-productos-agropecuarios-seleccionados-104471> >. Acceso em: 21 de agosto 2017.

SINGER, P. **Introdução à Economia Solidária**. São Paulo: Editora Fundação Perseu Abramo, 2002.

SOLER, M.; CALLE, A. Rearticulando desde la alimentación: canales cortos de comercialización en Andalucía. **PH Cuadernos**, v. 26, p. 258-283, 2010.

TORRES, F. El abasto de alimentos en México hacia una transición económica y territorial. **Problemas del Desarrollo**, v. 42, n. 166, p. 63-84, 2011.

VAN DER PLOEG, J. D. **Nuevos Campesinos: Campesinos e imperios alimentarios**. Andalucía: Icaria Editorial, 2010.