SITUATION AND PERSPECTIVES OF ORGANIC AGRICULTURE IN MEXICO AND OF THE ORGANIC PRODUCE MARKET

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Introduction

Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved (IFOAM, 2008). Organic farming does not use synthetic chemical products such as fertilizers and pesticides; the use of genetically modified organisms is avoided, along with sewage, radiation and nanotechnology (Gómez *et. al.,* 2010).

For Mexico, organic farming is a feasible option, given the goodness it offers the country, since it is linked to the geography of poverty, mainly with small-scale farmers with surfaces below 3 ha, 22 indigenous groups, and 35% of women responsible for farming. In addition, it is linked to a form of production that protects and preserves natural resources.

In Mexico, organic farming was first encouraged mostly in the 1980's, since developed countries, concerned about health of their habitants, began demanding organic products that they could not grow in their own lands. So it was foreign agents that requested that particular organic products be grown in Mexico. The production of healthy foods is carried out, mostly, in areas in which there is no use of chemically synthesized inputs; later, American companies began influencing the production in Northern Mexico, offering private companies and farmers funding and marketing, in exchange for organic products. Since then, organic farming has become a successful sector that has kept growing and expanding (Nelson, *et. al.,* 2008; Gómez, *et. al.* 2008; Gómez *et. al.* 2010). There are currently 380,000 hectares of organic crops nationwide, and over 128,000 farmers (Gómez, *et. al.,* 2010).

In order for a farmer to guarantee and prove to the consumer that the product is organic, it must comply with a set of rules and regulations for the process of production and/or processing of that product. The goal of organic certification is to verify, prove, and guarantee that the production on the field and the processing of the raw material are carried out based on the regulations for

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organic production. In this way, the farmer has a seal or certificate that gives the consumer a guarantee that the farmer is truly producing under this scheme, while helping the farmer obtain a surcharge on the product being sold (Gómez Tovar *et. al.,* 2001).

There are two types of organic certification: third party organic certification and participatory organic certification, also known as Participatory Guarantee Systems –SPG- (De la Cruz, 2008).

This document addresses the situation of organic farming in Mexico and its socioeconomic characteristics, as well as its problems and what the Mexican government has done to support it. Finally, several conclusions are presented.

Situation of organic farming in Mexico

Unlike other agricultural sectors of the country, the organic sector has grown amidst the food crisis. The organic surface, the number of farmers, incomes created and the number of jobs display an annual dynamism greater than 25% since 1996 (Table 1).

Table 1. Evolution of organic farming in Mexico, 1996-2008.

	1996	1998	2000	2004/05	2007/08	Growth rate (%)
Surface (ha)	21,265	54,457	102,802	307,692	378,693	32.37
Number of farmers	13,176	27,914	33,587	83,174	128,862	25.61
Direct jobs	13,785	32,270	60,918	150,914	172,293	28.73
Income (US$1,000)	34,293	72,000	139,404	270,503	394,149	27.66

Source: Gómez Cruz, *et. al.,* 2010.

Organic farming is an important economic activity in creating jobs and income. Its adoption requires an average of 30% greater workforce per hectare than conventional farming, thus contributing to the creation of 172,000 direct jobs. Mexico is a world leader in the production of organic coffee and its agro-environmental characteristics also give it a comparative advantage in the production of winter vegetables and tropical fruits, the markets of which have been mostly aimed at international trade, creating an important source of income.

At a national scale, there are over 650 organic production units (considering each farmer organization as a production unit). The predominant activity within organic farming is organic agricultural production, since it contains 91.6% of the units and 97.2% of the farmers (Table 2).

The greatest concentration of growth for organic farming is in the states of Chiapas and Oaxaca, the poorest in Mexico, with the lowest Human Development Indices. Likewise, Mexico is one of 12 countries in the world

known as “megadiverse”; Chiapas, Oaxaca and Veracruz contain approximately 70% of the country's biodiversity.

Table 2. Mexico. Economic importance of organic farming per sector, 2008

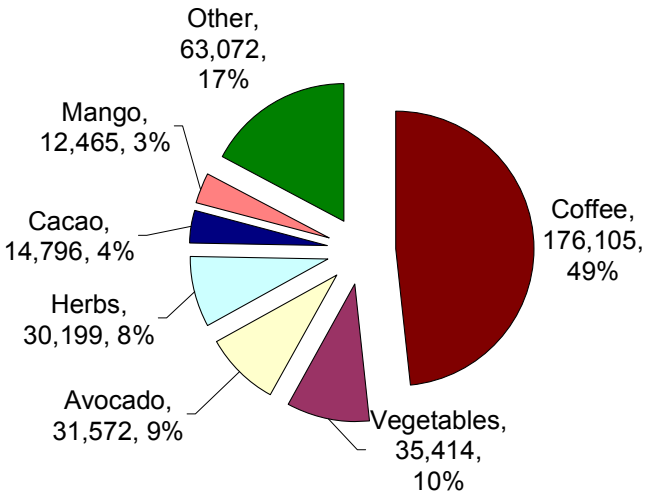
Sector	Surface	Farmers (number)	Direct Jobs	Income produced (US$ 1,000)
Agriculture	326,436.5	125,031	167,566	390,603
Wild Collection	46,208	43	43	s/d
Cattle farming	6,049	47	38	No exports
Beekeeping	37,455 hives	3,741	4,646	3,546
Total	378,693.7	128,862	172,293	394,149

Source: Gómez Cruz, *et. al.,* 2010.

The distribution of the organic surfaces by entities is 32% in Chiapas, 17% for Oaxaca, 13% for Michoacán, 8% for Querétaro, 4.6% for Tabasco, 4.9% for Guerrero, 4% for Veracruz, 3.7% for Sinaloa, and the rest is distributed in the remaining entities.

In 1996, 30 organic crops or crop groups, in associations, were grown, and by 2008, this figure grew to 67. However, 15 crops concentrate 97.3% of the reported surface for organic farming. This implies that although there is a tendency towards the diversification of organic farming as a result of farmers' efforts to broaden the variety of products (bamboo, garlic, neem, peanut, and apricot are crops that have become a part of organic produce in the last 5 years), the surface used for the production of coffee (49% of the country's organic surface) still stands out. Other important crops include vegetables, with 9.3%, avocado with 8.3%, herbs with 8%, cacao with 3.9% and mango with 3.3% of the country's organic surface (Figure 1).

Figure 1. Mexico. Surface of the main organic crops, 2008 (ha)



Source: Gómez Cruz, *et. al.,* 2010.

Cattle farming is still in a budding phase; there are only 47 production units in the country. Veracruz and Tabasco are the main producing states, mainly with beef, and to a lesser extent, dairy and other types of cattle (sheep, chickens, etc).

Table 3. Mexico: Surface of organic livestock production per species, 2004-2008 (hectares and %)

Species	Surface			
	2004/05		2007/08	
	Hectares	(%)	Hectares	(%)
Meat bovines	9,122.20	60.00	5,796.80	95.83
Meat and milk bovines	771.60	5.10	128.00	2.12
Milk bovines	482.00	3.20	n.d.	n.d.
Sheep	353.00	2.30	60.00	0.99
Others			64.20	1.06
National Total	**10,728.80**	**100.00**	**6,049.00**	**100.00**

Source: Gómez Cruz, *et. al*., 2010

Beekeeping has shown a more promising behavior, with 23 production units, composed mostly of social organizations of farmers in Quintana Roo and Oaxaca, which add up to over 3,700 farmers and 37,000 hives. This has led to a production of more than 1,326 tons, nearly 60% of which is exported to European markets and valued at 3.5 million dollars.

For production certification in Mexico, the third party certification process is the most used, although participatory certification has been increasingly used.

In Mexico, there are over 20 agencies, out of the more than 450 in the world; only one is originally Mexican (CERTIMEX). Table 4.

Table 4. Mexico: Certified farming surface per agency

Certifier	Country of origin	Surface 2004/05		Surface 2008	
		Hectares	(%)	Hectares	(%)
Certificadora Mexicana de Productos y Procesos Ecológicos, S. C. (CERTIMEX, S. C.)	Mexico	97,419.96	27.02	76,824.31	24.85
Institute for Marketecology (IMO Control)	Bolivia	69,525.49	19.28	N.d.	N.d.
Naturland	Germany	47,750.12	13.24	56,758.64	18.36
Bioagricert	Italia	38,569.06	10.70	27,158.49	8.78
Organic Crop Improvement International (OCIA)	Canada	51,910.48	14.40	70,591.42	22.83
Oregon Tilth Certified Organic (OTCO)	U.S.A.	14,666.84	4.07	9,422.82	3.05
KRAV	Sweden	11,594.00	3.22	8,133.32	2.63
Others				60,288.03	
Total		**360,515.92**	**100.0**	**309,177.03**	**100.0**

Source: Gómez *et. al.,* 2010.

According to Lernoud and Fonseca (2004), participatory organic certification, alternative, confidence, collective certification, or the Participatory Guarantee Systems, as known by the International Federation for Organic Agriculture Movements (IFOAM) can be differentiated from third party certification because the former comply with organic requirements, yet they maintain simple verification procedures, a minimal bureaucracy, minimal costs and they normally include a teaching process and social control that involves the actors of the production chain (farmers and consumers).

The Mexican *Tianguis* and Market Networks (Red Mexicana de Tianguis y Mercados Orgánicos, Red A.C.) (2009) defines participatory certification as a collective process between farmers, consumers and other actors, that guarantee the healthy, organic quality of local products, produced at a small scale, based on trust relationships and that promote commitments of environmental health, justice and environmental certainty.

There are currently dozens of participatory guarantee systems used by producers and consumers around the world. Although details regarding methods and processes vary, the consistency of the basic principles within countries and continents is quite diverse. The true vital substance of these programs lies in the fact that the very producers and consumers they are serving, create them. As such, they are adopted and are specific to individual communities, geographies, policies and markets in which they were created (IFOAM, 2007).

Participatory certification is closely linked to styles of alternative markets in local markets, sales in farms, consumer cooperatives, the Community Supported Agriculture, or CSA´s, home delivery of food, and others (De la Cruz, 2008; Renner, 2008; IFOAM, 2007; Nelson, *et. al.,* 2008).

In Mexico, participatory certification is mainly used for the local market by the member markets (25) of the *Red Mexicana de Tianguis y Mercados Orgánicos*[4], following article 24 of the Organic Products Law.

Problems of organic farming in Mexico

There are several types of problems throughout the production-marketing-consumption chain for organic crops, which not only impair its dynamism, and change its structure significantly, but also limit the potential of its results and impacts.

In the technical aspect, what stands out is the fact that most people polled mentions a need to form specialized technical groups for processes and organic techniques (work process of the crops, raising animals, organic transformation and marketing); and a low transfer of technology from the research centers and universities to the sector (47% of those polled). These elements, along with other technically relevant ones, may lead to a gradual drop in the productivity of incomes by producers, which not only impacts in the reduction of farmers'

[4] www.mercadosorganicos.org.mx

incomes, but also in the discouragement of many farmers towards this generous form of production.

In terms of economy, we can point out the insistence by individual and organized farmers (64% of those polled) upon the fact that the country has no finance mechanisms for this type of agriculture, particularly when, during transition, one must wait 2 to 3 years before being able to market a product as organic. Additionally, changes are required in the infrastructure of production units, annual certification payments, access to information, technical consultancy, specialized skills, search for markets, and others.

Despite social organizations being able to certify their productions, and to implement internal control structures to inspect their partners (Internal Control System for Third Party certification) and establishing agreements with trading companies, they cannot gather 100% of the organic produce of their partners, since organizations rarely dispose of funding with amounts that help gather all of its production and pay the high market prices to its members in this first instance (the payment is later adjusted based on the sale price obtained in the organization). This leads to wasting resources invested in the production, training, inspection, and certification. In turn, multinational corporations are taking advantage of this situation and are buying this produce, destabilizing the organizations (Perea, 2011). An example of this has recently been found in organic coffee.

In terms of market, there is a strong dependence on exports, by at least 80%, whilst the internal market is growing, although in an unplanned manner, making supply erratic and focused on producing sates. This occurs to such an extent that it is now possible to find imported products marketed in specialized stores and supermarkets.

Table 5. Mexico: Destination of the organic products exported, 2007-2008

Product	Countries
Coffee	Germany, Denmark, France, Netherlands, England, Italy, Switzerland, USA, Canada, Japan and others.
Avocado	Canada, USA, Japan, Switzerland and others.
Fresh fruit	Germany, France, Netherlands, England, Switzerland, USA, Canada and Japan.
Dried fruit	Germany, Netherlands, England, Switzerland, USA and Canada.
Vegetables	Germany, France, USA and Canada.
Herbs	USA and Canada.

Source: Gómez Cruz, *et. al.,* 2010.

Another crucial aspect is the lack of organization in the sector. Although it is true that farmers are organized locally in their own legal structures, currently, there is not a national structure that helps debate the priorities and crucial aspects concerning the sector. For example, what elements should be given more support? Or what proposals should become part of a national research strategy in organic farming? The creation of government support, lobbying with the Senate and chamber of Deputies, amongst many others.

In the institutional framework, although a complete regulatory framework is being established, 5 years after having published the Organic Produce Law, the specific guidelines for each subsector (agriculture, livestock, wild collection, beekeeping) have not yet been published, which makes farmers use international regulations and become certified privately in order to continue selling their products. Additionally, institutions know little about this type of agriculture, limiting its support and the recognition of all its virtues. Contrary to this, in some organic production areas, it is the institutions that discourage production support to products by supporting chemically synthesized products or subsidizing synthetic inputs.

What has the Mexican government done to promote organic farming?

Mexico has progressed slowly in terms of supporting organic agriculture. In September 2007, the National Organic Farming Council (*Consejo Nacional de Producción Orgánica*, or CNPO) was created under the Organic Produce Law, as an assessment authority. It is made up of farmers, processers, marketers, and organic certification organisms, as well as representatives from Ministry of Agriculture, Health and Economy, and research institutions.

During 2009 and in early 2010, in an agreement signed by SENASICA and the Universidad Autónoma Chapingo, a consultation process was carried out by means of workshops with experts in the area for the creation of the Technical Guidelines for the Functioning of Organic Agriculture, of the Internal Control System (SCI) for Groups of Small-Scale Farmers, of the Guides for the Support of Organic Farming (fruits and vegetables), as well as other topics of crop production, fields, organic fertilizers, handling plagues and diseases, and others.[5] The intention of these is to provide work tools that help create the specific regulatory guidelines for each subsector within organic farming, which need to be regulated.

During the Fifth General Membership Meeting of the National Organic Production Council (Consejo Nacional de Producción Orgánica, CNPO) on October 28, 2010, the Shared Risk Trusteeship (Fideicomiso de Riesgo Compartido, FIRCO) gave a report in the investment induced towards the organics sector, which amounted to $65.6 million pesos, which helped 11,719 farmers. These public resources stimulated farmers into investing almost $86 million pesos in their agribusinesses, creating altogether a production valued in over $158.9 million pesos.

In the session that took place in March 2001, the CNPO approved the creation of a National Organic Agriculture Promotion and Support program, which will possibly be discussed in the next session this year.

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Conclusions

- The market for organic produce has grown exponentially in the last 20 years, since there is a growing interest by consumers for their health and the protection of their environment.

- Mexican organic farming is linked to the external demand for environmental foods, whereas the growth of the internal market is a secondary concern.

- The organic sector in Mexico includes over 380,000 ha and 129,000 farmers, it created 172,000 permanent jobs and 394 million dollars in revenues; it is linked to the geography of poverty, and the biological and ethnic diversity of the country, since it is located mostly in the south and southeast, where 99.9% of the total farmers that have less than 3ha belong to some indigenous ethnic group (88%), out of which 35% are women and in charge of the organic fields.

- Organic agriculture is one of the few options that most experts have found to contribute in an important manner to the solution of major national and worldwide problems such as climate change, starvation, poverty, family food security, migration, unemployment and underdevelopment. In Mexico, therefore, there is an opportunity for the State to catalyze most of the virtues of this type of agriculture and support a form of production that could guarantee better living conditions for farmers and Mexican society in general.

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