

Certified organic agriculture in Mexico: Market connections and certification practices in large and small producers

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Abstract

Certification within organic agriculture exhibits flexibility with respect to practices used to demonstrate that a product meets published quality standards. This case study of Mexican certified-organic agriculture finds two forms. Indigenous smallholders of southern Mexico undertake a low-input, process-oriented organic farming in which certification is based upon extensive document review, group inspections, and assessment of on-farm capacity to produce organic inputs. More recently, northern Mexican large agribusiness producers have implemented certifications based upon laboratory testing and assessment of purchased inputs. To specify these differences, this article examines large and small producers in Mexico's organic agriculture sector based on a diagnostic census of Mexican organic agriculture in 668 production zones and field surveys in 256 production zones in which 28 indicators were analyzed. After comparing the organic cultivation and certification practices of large, agro-industrial, input-oriented private firms versus small, cooperatively organized, indigenous and peasant groups, we analyze the implications of this duality for certification frameworks. We argue (with Reynolds, L., 2004. The globalization of organic agro-food networks. *World Development* 32(5), 725–743; Gonzalez A.A., and Nigh, R., 2005. Smallholder participation and certification of organic farm products in Mexico. *Journal of Rural Studies*; DeLind, L., 2000. Transforming organic agriculture into industrial organic products: reconsidering national organic standards. *Human Organization* 59(2), 198–208) that the increasing bureaucratic requirements of international organic certification privilege large farmers and agribusiness-style organic cultivation and present the possibility of a new entrenchment of socio-spatial inequality in Mexico. While organic and fair trade agriculture has been touted as an income-generating production strategy for small producers of the Global South, our study suggests that Mexican organic agriculture reproduces existing social inequalities between large and small producers in conventional Mexican agriculture.

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1. Introduction

This is a story of two Mexican organic certifications. In southern Mexico, indigenous peoples, working on small plots, produce organic products, certify using labor- and inspections-intensive methods and rely on support from regional producer organizations; in northern Mexico, large organic agribusiness producers utilize capital- and technology-intensive, minimal-inspections methods and rely on support from international organic-product distributors.

Certification as a technological practice proves malleable and can reinforce the social and economic advantage of large producers, rather than supporting equity among producers.

Two images of certification in moments of crisis, the first a smallholder producer group and the second an agribusiness, underscore these differences:

During a meeting at a southern Mexican producer-union headquarters (July 2001), set to review annual inspection reports from a certified-organic coffee producing villages, it came to light that dozens of inspection reports had not been signed by an accredited village inspector (names of approved village inspectors who have taken inspections coursework and passed an exam

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are kept in a database accessible to certifying agencies). Since the external inspection date was fast approaching, and the external inspector would have had no choice—under such conditions—but to reject the entire village’s coffee harvest, a special commission was formed of peasant certified-organic inspectors from five different villages and sent on an emergency mission to re-inspect producer plots and paperwork. (Field notes, Oaxaca City, July 2001)

A shipment of organic greens produced by a large Mexican agribusiness-producer and air-freighted to US markets was, upon inspection, found to have a contaminated with a potent pesticide. The certifying agency faxed an urgent note to the producer in Mexico who promptly responded by destroying produce lots in fields from which the contaminated sample originated, air-freighting additional samples to independent labs in the US, hiring guards to watch the fields at night (sabotage was alleged), and paying for an external inspector to reexamine the entire farm operation including equipment and production plots, production methods, and receipts from purchase of imported organic inputs. (Field notes, Oaxaca City, July 2005)

These cases indicate ways in which certification practices vary with respect to farm types. Samples, receipts, security arrangements, access to capital and use of international corporate expertise of northern agribusiness organic certifications stand in sharp contrast to document-based, process-oriented, labor-intensive communal-land inspections and use of regional (peasant associations) networks of smallholder certifications. To develop this analysis of differential certifications, contextualize these with respect to Mexican agriculture, and reflect on the implications for farm equity, we examine these topics in two main sections. First, after introducing research methods we review the global and national contexts of organic agriculture in Mexico. Second, we describe divergent practices of large and small producers and assess implications of these differences. Finally, we close with policy recommendations that address the sectoral inequalities of organic agriculture.

2. Certified-organic as a Mexican agrarian solution?

In this section, we assess the bimodal distribution of farm size in Mexican certified-organic agriculture. To make our case with respect to the relationship between certification and farm size class, we establish farm characteristics and locate farm size classes within a broader discussion of Mexican agriculture. In Mexico, we find that the bimodal distribution of conventional farmsteads is reproduced in organic agriculture (see Table 1). Not only does the separation into large and small farms hold, but geographic—North (large) versus South (small)—and crop-type differentiations hold as well. Following a discussion of research and analytical methods on which this study is based, we examine the Mexican agrarian context, discuss

its linkages to international organic agriculture and examine ways in which this context shapes certified-organic agriculture. This assessment provides support for our thesis that certification, far from providing a leg up for smaller, socially disadvantaged yet environmentally sensitive producers, instead—in the absence of a social-justice challenge—conforms to the demands of powerful producers. The notion that certified-organic agriculture can provide an easy agrarian solution, an economic program in support of small farmers the runs counter to prevailing social relations in Mexican agriculture, is problematic at best.

2.1. The case study

The present paper bases its conclusions on a review of published studies and technical reports on Mexican certified agriculture, applicable laws and standards at a national scale, on global certification standards and practices, and on fieldwork conducted by the authors. Statistical information for years 1996, 1998, 2000, 2002, and 2004 were compiled by the Center for Economic, Social and Technological Studies in World Agriculture and Agroindustry (CIESTAAM) of Mexico’s Chapingo Autonomous National University. Data for 2004 are preliminary results of the study “Sistema de Seguimiento e Información de la Agricultura Orgánica en México, 2004” (Mexican Organic Agricultural Information Collection System, 2004), led by the authors Gómez Tovar and Gómez Cruz.¹ This project compiled a list of Mexican organic producers based upon information provided by field surveys and certification agencies (Certimex, OCIA, Oregon Tilth, Bioagricert, among others). The study identified 668 production zones, defined as an organic production unit or group of production plots with a single certification permit. These zones served as the unit of analysis in the first phase of the project.

Using the national directory of organic agriculture, a random sample of 256 production zones,² or 38.32%, were interviewed by telephone to obtain preliminary data on location, area, number of producers,³ and the certified producer organization. The sample covered all 28 Mexican states where organic agriculture is practiced and was weighted according to hectares under cultivation and number of enterprises in the 2000 census and 2004 directory. Field interviews consisted of 69.29% smallholder respondents and 30.34% other respondents (information access to the latter case was much more restricted). The

¹Empirical data presented here was collected by Gomez Tovar, Gomez Cruz, and Mutersbaugh. Martin contributed to literature review, data analysis, and manuscript organization.

²Two hundred and eighteen in organic crops, 18 in organic meats, and 20 in organic honey. The 218 interviews with organic crop producers covered 45 crops: 80 coffee; 22 vegetables; 9 mango; 8 each of nopal (cactus) and guayaba; 7 each of apple and aloe vera; 6 of corn and agave; 5 of chocolate; 4 of litchi; and 3 each of avocado sugarcane and banana; 2 each of lemon, coconut, nuts, blackberry and neem; and 37 other crops.

³This data was not always available.

Table 1
México. Producer typology for certified-organic agriculture, 1996–2000

Type of producer	% of producers		% cultivated land		% economic returns	
	1996	2000	1996	2000	1996	2000
Small	97.50	98.60	89.00	84.15	78.00	68.84
Large ^a	2.50	1.40	11.00	15.85	22.00	31.16

Source: Gómez C. et al. (2001, p. 21).

Small producer: less than 30 ha and organized in production groups. Large producer: more than 100 ha.

^aMedium producers of 30–100 ha are included with large producers.

project evaluated 28 indicators, including: production zone, number of producers involved, type of producer, area planted and harvested of each product, production by type of product, yield by product, sales price by product, destination by product, aid and grants received, production and marketing financing, data about certification processes, and barriers to expansion of organic agriculture. The sample was stratified to include the organized smallholder groups and large agroindustrial firms discussed in this paper. Below we analyze this study in the context of domestic demand, economic crisis, international certification frameworks, and shifting geographic concentration.

2.2. Mexico's organic sector

At present, nearly a quarter of a million hectares are certified by up to 17 organic certification agencies, mostly foreign, operating in Mexico (see Table 2), and a Mexican national certifier (Certimex) that has been formed and accredited under the ISO guide 65 criteria and is in process of becoming accredited under the US Department of Agriculture's National Organic Program. This rapid expansion of certification agencies and hectares under crop shows the increasing importance of certified-organic production (from 8 to 17 certifiers, and 175% growth in ha under cultivation since 2000).

As noted, growth in Mexican certified-organic came in two waves. Initially, activists from consumer countries teamed with Mexican indigenous and peasant organizations to provide products that were certified both organic and fair-trade. Indigenous peoples and peasant farmers, neglected by green revolution-style (agrochemical-dependent) agricultural development, were already utilizing organic production methods and possessed sophisticated village-level land administration. Thus, certified-organic production could easily be implemented. These joined with NGOs and religious groups, and international organic networks were formed to meet existing demand (Gómez Tovar, 2000, pp. vii–viii).

In the 1990s, early southern Mexican entrants were joined by a second wave of mostly Northern-based organic producers. However, as crop shifted from coffee to winter vegetables and fruit (Table 3) the share of organic land in Chiapas and Oaxaca combined fell from 70% to 42.4%,

Table 2
México. Production area certified- or in-transition-to-organic, 2000 and 2004

Certified-organic area (ha)		Certifying agency
Year 2000	Year 2004+	
40,654.55	41,335.74	OCIA-México
30,952.10	65,948.75	Certimex
20,701.50	37,420.00	Naturland ^a
12,463.00	2527.00	Quality Assurance International (QAI)
100,000.00	34,631.48	Bioagricert
7926.00	756.00	OCIA International
2181.50	32,378.30	IMO Control
1503.50	5876.17	Oregon Tilth Certified Organic (OTCO)
974.00	0.00	EKO
810.00	0.00	CADS
459.00	430.00	Demeter Bund
299.00	0.00	Aurora Certified Organic
0.00	357.52	Internacional Certification Services (ICS-FVO)
n.d.	45.00	GOCA
n.d.	4040.00	BCS Oko Garantie
n.d.	197.00	CCOF
363.60	0.00	Otras
^b 129,247.05	225,942.96	Total

Source: CIESTAAM, 2004. Preliminary information based on fieldwork and certification agency information, 2000 and 2004.

+ : Preliminary data; n.d.: No data.

^aIncludes some production zones certified by Certimex.

^bTotal is less than column sum since a farm field may be certified by more than one agency.

indicating the increased importance of large-scale organic agriculture. Coffee, nevertheless, remains the most important crop in 2004, produced in 45.26% of production zones, followed by fruit (30%), avocado (12.7%), winter vegetables (6.57%), and other cultivars comprising 5.4%. Preliminary CIESTAAM data indicates that 25.5% of all coffee grown in Mexico is produced organically.

Within Mexico, the domestic consumption of organic products has remained relatively small. Approximately 15% of certified organic production is destined for internal markets and only 5% is sold as organic, while the rest is sold with conventional products and without the associated

Table 3
México. Area under organic cultivation by product

Product	Area (ha)				
	Total 1996	Total 1998	Organic 2000	In transition 2000	Total 2000
Coffee	19,040.00	32,161.00	49,512.05	21,326.04	70,838.09
Corn, blue and white	n.d.	970.00	2074.00	2596.50	4670.50
Sesame	563.00	1895.00	2843.50	1281.25	4124.75
Greens	2387.00 ^a	4391.00 ^a	3307.09	524.40	3831.49
Maguey	n.d.	n.d.	3047.00	0.00	3047.00
Herbs	^b	^b	2454.00	56.90	2510.90
Mango	n.d.	284.00	875.00	1200.00	2075.00
Oranges	n.d.	n.d.	1849.90	0.00	1849.90
Beans	n.d.	1241.00 ^c	1334.00	263.00	1597.00
Apples	380.00	2010.00	743.00	701.50	1444.50
Papaya	15.00	73.00	71.50	1100.00	1171.50
Avocado	85.00	307.00	891.00	20.00	911.00
Soy	n.d.	n.d.	765.00	100.00	865.00
Bananas	300.00	500.00	826.00	0.00	826.00
Chocolate	n.d.	252.00	20.00	636.00	656.00
African palm	n.d.	n.d.	0.00	400.00	400.00
Vanilla	150.00	1203.00	63.00	268.00	331.00
Pinapple	n.d.	n.d.	34.50	294.50	329.00
Others	353.00	9170.00	753.60	570.15	1323.75
Total	23,273.00	54,457.00	71,500.14	31,302.24	102,802.38

Source: Gómez Cruz et al. (2001, p. 14).

n.d.: No data.

^aIncludes herbs.

^bincluded in greens.

^cIncludes garbanzo.

price premium. The primary reasons for this are low levels of consumer knowledge, the corresponding difficulty of consumer willingness to pay premium prices, and inconsistent supply (Gómez Tovar et al., 2001, pp. 119–125). Despite this, organic products are sold through increasing diverse channels including open air markets⁴; organic specialty stores and franchises, natural stores, cafes,⁵ restaurants, small-producer cooperative ventures,⁶ and supermarkets.⁷ While the domestic market for certified organic is expanding, Mexico's organic agriculture sector remains reliant on foreign markets.

2.3. Organic production and economic crisis

One dynamic prompting certified-organic expansion may be found in the general economic crisis that has gripped the Mexican countryside since the late 1980s. Hard-pressed

⁴See www.mercadosorganicos.org, www.chapingo.mx/ciestaam/to

⁵The majority are producer initiatives: Cafeterías La Selva of the Unión de Ejidos de la Selva co-op; Café Museo Café of the Majomut, OPCAAC, and CESMACH co-ops; Café UCIRI of the Unión de Comunidades Indígenas de la Región del Istmo co-op; Bio Café of the Unión de Ejidos San Fernando co-op; Café La Caracola of the CEPSCO co-op; Cafetería Gramlich of the Rancho Gramlich co-op; Orgánica; Quali; Las Cañadas among others.

⁶See www.mercadosorganicos.org

⁷Milk, cheese, cream, yogurt, coffee, herbs sold in Walmart, Sumesa, Gigante and Carrefour.

Table 4
Fair Trade coffee sales worldwide, 1997–2002

Type of fair-trade coffee	1997	1998	1999	2000	2001	2002
Non-organic coffee (t)	11.200	8.800	9.115	8.615	9.488	11.755
Organic coffee (t)	1.900	2.000	4.140	5.421	7.480	9.333
Total (t)	13.100	10.880	13.255	14.036	16.968	^a 21.108
Percentage organic (%)	15	20	31	39	44	44

Source: FLO, 2003.

^a458,870 quintales. 1 qq = 46 kg of coffee.

indigenous and peasant producers were forced to confront a combination of declining commodity market prices and loss of government economic support. Background contributors include loss of crop-price support programs of the 1970s and 1980s (Taylor et al., 2004; Finan et al., 2005) and increased off-farm labor and migration (de Janvry and Sadoulet, 2001; Hamilton et al., 2003). Within this context, producers were willing to undertake the organizational and financial costs of certifying products as organic (Mutersbaugh, 2004). Coffee exemplifies this trend; from 1999 to 2004 the international commodity market price dropped to US\$45/quintal (100 lb or 46 kg of coffee), well below the US\$80/quintal cost of production (See Table 4).

Table 5
México. Organic agricultural expansion, 1996–2002

Year	1996	1998	2000	2002	2004*	AGR %
Land cultivated (ha)	23,265	54,457	102,802	215,843	400,000	43
Number of producers	13,176	27,914	33,587	53,577	120,000	32
Workdays(1000)	3722	8700	16,448	34,534	64,000	42
Income(US\$1000)	34,293	72,000	139,404	280,698	> 350,000	34

Source: Gómez Cruz et al. (2004, p. 15).

AGR: Annual growth rate. Estimate.

This push from low conventional (non-organic) market prices and pull from high organic market growth prompted a rapid increase in Mexican organic acreage. Table 5 shows a 43% annual growth rate in organic cultivated land, and a 32% annual growth rate in number of producers. That cultivated land has outpaced number of producers indicates that larger pieces of land are being used for organic products, which corroborates the rise in large-scale production in northern Mexico. Thus, certified organic agriculture is becoming less an income-generation strategy for poorer farmers with smaller parcels of land and more a cash-oriented investment and diversification strategy for large conventional producers.

2.4. The context of Mexico's bimodal production

Differentiation of Mexican organic farms into large versus small farms is not unique to Mexico. It is present in the North American case, and likely in the EU and other regions as well (Freidberg, 2003; Renard, 2005), although presentation of organic market growth in by-country averages makes this conjecture difficult to verify (see Willer and Yussefi, 2005, pp. 19–21). The California case is instructive. First, two interlinked tendencies contribute to the differentiation of California organic agriculture. On the one hand, the consolidation of an 'organic-industrial' complex comprised of large distributors linked to organic foods processors and retailers (see Pollan, 2001) has stimulated the emergence of large, vertically integrated organic farms (whether converted from conventional agriculture or the result of expansion in existing farms). On the other, continued entry of small farmers into certified-organic agriculture has been stymied by stagnation in organic producer prices that has squeezed small producers who must scramble to cover increased production and certification costs while farm-gate proceeds remain constant at best (Guthman, 2004, p. 33).

Second, California industrial-organic networks reach into Mexico. A recent study indicates that Mexican organic crop acreages are increasing relatively more quickly than in the US (Gianessi and Reigner, 2005) and points to organic products 'outsourced' to Mexico because the appetite of organic agriculture for cheap Mexican labor for pest and weed control.

The Mexican case bears similarities to the California case, yet differs in other respects. As in California, small

Mexican producers are squeezed by the pressure of price stagnation in organic markets, caused in each case by competition from cheap-labor producers (Californian agribusiness organic farms make use of cheap migrant or Mexico-based plantation labor; Mexican coffee growers compete with lower-wage workers in, for example, Peru or Ethiopia). Also like California, large agribusiness producers are benefiting from the oligopsonistic power of large-scale distributors that provide entrée into US markets through contracts and vertical-integration arrangements (see Renard, 2005). And yet unlike California, unequal farm distributions are historically and geographically embedded in Mexico's agrarian formation. For example, a recent study making use of the RAN (Registro Agrario Nacional) data found that 50.2% of farmers on ejidos (a form of Mexican land tenure) have plots smaller than 5 ha, while 1.3% of ejido farmers operate units larger than 50 ha (Zorrilla, 2003).

Thus arises a paradox: the ever greater role of organics in which the ever-greater role of organics in global food markets, thought to provide an agrarian solution that would support the efforts of small, family farmers, in fact works within existing agrarian formations to reinforce the power of large, agribusiness estates based upon the use of low-wage farm labor.

2.5. Governance and certification in Mexican organics

Within the context of this agrarian formation, the Mexican state plays an important role in certified agriculture. To place this role in an international perspective, we here consider the respective roles played by states, transnational institutions, and certifying agencies before taking up the specificities of the Mexican case. In the early years of global organic agriculture, commercial relations were based on direct agreements between producers and consumers, relationships of trust, and a shared knowledge of local level technical and social production (Guthman, 2002; Gonzalez and Nigh, 2005). As international organic markets and international standards have developed, local trust relations have become more difficult to maintain as the basis for commercial agreements (Gómez Tovar et al., 2001, p. 39). Trust has been replaced by transnational certification frameworks such as the US Department of Agriculture's National Organic Program (NOP) and the EU 2092/91 organic standard (Mutersbaugh, 2004), in turn

harmonized to the International Organization for Standardization's (ISO) Guides 65 and 61.

Within the context of this transnational certification template, however, it is possible to take significantly different approaches. In Mexico, this has allowed for the development of *dual certification templates*—two distinct certification modalities, one for large agribusiness organic farming enterprises, and another associated with small indigenous and peasant farmers. Smallholder organic agriculture is labor-intensive, process-oriented (in the organic sense of working with ecological processes) and linked to fair-trade markets. Large-scale agribusiness-organic agriculture that is capital-intensive and input-oriented (again, in the organic-agricultural sense of using predominantly purchased, off-farm organic inputs) and linked to US organic distributors (Guthman, 2004, p. 47; Renard, 2005).

In either case certification is expensive, and so governments have provided support. Two models predominate. In the EU, certified organic agriculture is viewed as a long-term solution to natural resource conservation concerns, restoration of rural landscapes, and public health promotion. EU states provide direct and indirect aid to certified organic production (US\$250 million in 2001) and as of 2004 had formed a European Action Plan for organic agriculture (Lampkin et al., 2001, p. 392). Alternatively, Mexico, for example, has viewed certified organic agriculture as a short-term solution to export and foreign exchange concerns. As such, the Mexican state has not developed a national strategy. The major support for smallholder certification efforts have come from foreign foundations such as Bread for the World (Brot für die Welt),⁸ MOA of Japan, the InterAmerica Foundation, McArthur, Rockefeller and Rodin of the US; and multi-lateral sources such as the InterAmerican Development Bank (IDB) and Northamerican Fund for Environmental Cooperation (FANCA). Mexican NGOs have also provided support, such as, among others, the Fundacion Vamos (Sierra, 2003, pp. 231–240), Servicio de Paz y Justicia A.C., the Centro de Agroecología San Francisco de Asís and the Grupo de Desarrollo Comunitario de los Tuxtlas. State governments have also provided support, e.g., Oaxaca's CECAFE. Dependence on NGOs has meant that support also depends on international funding dynamics and relatively short-term programs and that there is no guarantee that support will be equitably available or distributed.

2.6. Shifting production

In sum, growth in Mexican organic agriculture has shifted from a first wave tied to a demand for products that are both organic and fairly traded—a wave that empha-

sized fair-trade, organic coffee produced by indigenous peoples and peasants—to a second, post-2000 wave dominated by US distributor investment in contract production by agribusiness interests and large farmers. This second phase has also been aided by credit and capital incentives to northern Mexican firms, with the result that US organic food distributors may now more easily meet consumer demand for year-round greens and vegetables while reducing production (particularly labor) costs. It is important to note, however, that the second wave does not displace the ongoing first wave, but coexists with it, creating a bimodal Mexican farm distribution.

This coexistence has led to an analytically important juxtaposition of first-wave indigenous fair-trade producers with second-wave agribusiness concerns, grouped together under the organic rubric. Organic product consumers who attempt to satisfy social and ecological ethical principles purchase certified-organic food. Yet while some products (coffee, hibiscus, chocolate) are produced by indigenous peasants using ecological agricultural methods and locally produced inputs, other products (greens, mangos, winter vegetables) are produced using an input-intensive, labor-exploiting farming model indistinguishable, but for agrochemical use, from conventional agriculture. In this manner the positive social-environmental reputation of indigenous and smallholder peasant production serves to “greenwash” industrially produced yet certified-organic foods (Goodman, 2004; Renard, 2005). The significance of this bimodal distribution for certified products will be explored through the descriptions of large and small producers below.

A few important trends emerge from the shifting pattern of production. First, state-supported organic agriculture's geographic location in countries of the global North creates certain conditions for producers in countries, such as Mexico, in which access to niche markets is created by gaps or limited seasons in Northern countries (see also Reynolds, 2004). Second, a low level of domestic demand prevents diversification and/or year-round markets. Third, income and volume of production are shifting to larger firms, who represent very different farming philosophies. Fourth, organic production's recent shifts take on an explicitly geographic character, with most new, large farms located in the northern part of the country where agribusiness has long been entrenched. Fifth, the increasing presence of large-scale producers is changing the landscape of Mexican organic agriculture in relation to its social, political, and geographic locations, leading to a corresponding shift in certification practices. These trends converge to reveal the presence of a dual economy of organic agriculture in Mexico, distinct in farming style, crop choices, farm size, organizational structure, certification practices, and relations with buyers in the US and Europe. Below, we characterize this divergence in terms of the on-site farming and certification practices of small and large producers. We argue that the radical divergence of these groups will continue to have significant impacts on

⁸“Bread for the World” is a program of the Evangelical Church and have helped groups like El Grupo Vicente Guerrero en Tlaxcala with EU\$114,000 for a period of 3 years.

the elaboration of existing certification frameworks and consequently on social justice aspect of organic and fair trade agriculture in Mexico.

3. Divergent practices: Mexico's large and small organic producers

Following the trends discussed above, large producers have been able to concentrate a disproportionate percentage of the income and market share of Mexico's organic agriculture sector. In 2000, small, peasant and indigenous farmers (small producers are here defined as farmers cultivating less than 30 ha) organized in producer groups represented over 98% of total organic producer zones, cultivated 84% of organic land on an average plot size of 2.6 ha and generated about 69% of the economic returns. Medium and large producers (here defined as farming 30 ha or more) with an average plot size of 37 ha, comprised less than 2% of the total, cultivated 16% of organic land, and received 31% of the economic returns in this sector. Though we would not want to overstate the current division, we do mean to signal the clear trend towards a wider gulf between small and large producers, and the marked difference in the technological underpinnings of the two sectors. As Table 1 demonstrates, the shift in economic returns from small to large outpaces the shift in cultivated land, indicating a growing concentration of income in larger, typically northern firms.

The key point is that plot size difference between large and small units is associated with significant variations in mechanical technology use, inputs, attitudes toward environmental impacts, and the use of labor. Table 6 compares the typical characteristics of small and large producers, described in more detail below. In this section of the paper, we lay out the dual nature of Mexico's organic sector. We argue further that this emerging duality complicates discussions of "the organic movement," the term often used to describe organic agriculture. The interview data and analysis supports what Reynolds' (2004) calls a "bifurcation" between "movement-oriented" and "market-oriented" producers and consumers. We describe the emergent sectoral duality in terms of the historical context of access to mechanized farm technology, the corresponding differences in farming practices and labor, environmental attitudes, and market access. After working through the differences between the two sectors, we examine the repercussions this sectoral division has on certification practices. The practical difference between the two groups plays out in social, political, and economic fields, which converge in international organic certification compliance norms.

3.1. Lasting legacies of the "green revolution"

The Green Revolution of the 1950s through 1980s had a negligible impact for small producers, especially in southern Mexico, yet forged a strong integration between

Table 6
Certified organic agriculture in Mexico by sector, 2004

Producer type/ characteristics	Small organic producers in producer co-ops	Large private agroindustrial organic producers
Number, % of total producers	117,600 producers, 98%	2400 producers, 2%
Land in production, % of total	336,000 ha total 84%	64,000 ha total 16%
Average size	2.8 ha Avg. farm size	26.6 ha farm size
Returns	US\$241 million	US\$109
% of total	69%	31%
Avg. Income/producer	US\$2036	US\$63,400
Principal products	Coffee, chocolate, hibiscus, vanilla, sesame	Vegetables, herbs, castor bean, aloe vera, fruit (mango, banana, pineapple, etc.)
Technology use	Peasant/indigenous combined with available low-cost modern technology; labor-intensive techniques such as hand terracing, compost heaps, natural pest control	Capital-intensive technology (foreign technology). Use of natural materials and biological controls prepared and applied using capital-intensive technologies
Source of inputs	Local, farmstead-produced. 'Process-organic' agriculture works with ecological processes to provide, e.g., reservoirs of beneficial insects and green manures from leguminous trees	External (phosphate rock, marine alga, commercial organic inputs, <i>Bacillus thuringiensis</i> , <i>Trichogramma sp.</i>). 'Input-organic' agriculture relies on purchased materials.
Principal labor source	Family	Contract
Production financing	NGOs, family funds, some state support	US-based marketers, company capital
Principal markets	Organic and Fair Trade niche markets (EU & US)	Organic niche markets and US retail chains
Certification type	Certification of producer groups based upon internal inspections subject to random external review	Certification of individual, private firms via external inspections
Principal certification Agencies	Certimex, OCIA, IMO-Control and Naturland	Quality Assurance International (QAI), GOCA, FVO, Bioagricert, OTCO, etc.

agribusiness, producers and the state in northern Mexico. This era's rural development strategies promoted mechanized planting and processing, the use of pesticide/herbicide packages, conversion to cash crops, use of high-yield crop varieties, and profit-orientation. Though promoted by governmental programs and transnational institutions,⁹ its major impacts were felt in irrigated flatlands (Otero, 1999). Mountainous zones were passed over for these programs due to inaccessibility and relatively small contribution to national agricultural production (14% of total) (Mata, 1994, p. 105). The Green Revolution production philosophy emphasizes input packages, mechanization, monocropping, and purchased agrochemical inputs, and is most accessible to large producers whose superior access to capital and larger average field size enables them to make more profitable use of these technologies. This input-model, transferred to organic production as organic inputs are substituted in place of synthetic agrochemical inputs, contributes to economic inequality between the large and small producers.

3.2. Farming practices

As would be expected, historical exposure to Green Revolution technologies has affected the day-to-day approaches to farming in the two sectors described here. Large producers rely on conventional mechanical technologies, but combine them with organic production techniques, such as shade screening for pest control, automatic nutrient monitoring, use of plastic barriers, and active biological research to increase yield and reduce costs. Following the input-model, large producers replace agrochemicals with organic inputs, such as compost, green manure, liquid compost preparations, composite nutritional powders, biological control (fungus, bacteria and natural predator species), commercial organic inputs made of natural plant ingredients (garlic, neem, ruda, epazote, marigold, oregano, etc.), and mineral additives (calcium, sulfur, copper sulfate), hedgerows, and traps (pheromone and plastic). The bulk of seed is imported. This group also tends to operate both conventional and organic farms, in separate areas.

Small producers, however, engage in 'process-organic' agriculture, using family labor to produce their own inputs and, with knowledge of local soil and climate conditions, nurture beneficial insects and green manures. Technologically, smallholders use mostly non-mechanized methods and rely heavily on indigenous horticultural technologies such as crop rotations, composting, plant-based pest control, and intercropping. For example, the Chinantecs of Santa Cruz, Oaxaca use terracing, and labor-intensive cultivation technologies to plant complex polycultures, thereby maximizing populations of beneficial insects and

providing nutrient sources from leguminous tree species while minimizing erosion on steep slopes. These differences also point to a more general disparity between the organization of available labor and capital between large and small producers, discussed below.

3.3. Field labor

In terms of field labor, small farmers make use of family labor, augmented during harvest periods with, in some cases, hired labor. Small farmers utilize household labor to make their own inputs, as mentioned above, and reduce the need for cash or credit. Fair Trade certification guarantees certain labor standards to the consumer and price premiums for producers. Organic certification alone does not include labor standards, a fact that allows large producers—who base production primarily upon wage labor—to make use of low-paid agricultural labor to reduce input costs. Thus, the combined organic and fair trade certification targets and embraces the small producer, while the organic label alone enables agribusinesses to directly compete with smallholders for market share.

3.4. Attitudes towards ecological impacts of agriculture

Large producers, who often farm both conventionally and organically, enter organic production to access premium prices and contracts, rather than to satisfy environmental or human health concerns. In its inception, the organic movement included a holistic vision of human and ecological health, a vision that drives many consumers to purchase organic products. Peasant and indigenous agriculture has been largely based on concepts, norms, and practices of holism and understandings of agriculture's place in ecosystems which are similar to organic ones (de Boef et al., 1993, p. 18; Scoones and Thompson, 1994, pp. 1–56). In the case of small producers, dominant worldviews in indigenous communities include the production of 'mother earth' as a part of a belief system that sets out symbolic and structural relations of peaceful, mutual co-existence between people and nature, and includes material and metaphysical aspects (de Boef et al., 1993, p. 18). This deeply held cosmology has prompted criticisms of organic agriculture as practiced in the global north as overly restricted with respect to its vision of ecological and community relations (Mutersbaugh, 2002). The long-term commitment to organic agriculture in Mexico will depend on its perceived benefits; if large producers lose access to niche markets and premium prices, they are likely to return to conventional agriculture without regard for the ecological consequences.

3.5. Market bifurcation

Together, Fair Trade and certified organic niche markets accommodate 85% of organic products from Mexico. For

⁹For example: Sistema Agricultura Mexicano (SAM) and The Rockefeller-financed CIMMYT-International Center for Corn and Wheat Improvement, Chapingo.

small producers, fair-trade markets guarantee the producer a price-plus-premium amount in order to cover the costs of production, which is often above the market price. This market is generally associated with bulk commodities like coffee, chocolate, bananas, sugarcane, orange juice, tea, and honey. Due to the requirements of Fair Trade certification, only small producers are able to sell as such, which contributes to the bifurcation of the organic sector. Because of the attractiveness of fair-trade market prices, and the limited market size, there is strong competition for entry into the market and few smallholder organizations are able to sell all of their product in this market (see Renard, 2005). Mexican small producers are quite active in fair-trade markets: for coffee, 33 organizations provide 27.3% of world fair-trade coffee market volume; for honey, Mexican producers provide 53% of world fair-trade volume.

Certified-organic products reach consumers through a different market that entails negotiations between a distributor or broker and the producing organization or firm. In this case, a price-plus-premium is also set, but with no limits on farm size or labor standards as with Fair Trade, although a small ‘social’ premium is provided to small producers and some organic labels, notably the EU’s Naturland, set maximum farm-size limits. Most of these large growers undertake production under contracts specifying production quantities, varieties, and delivery dates. The majority pay a commission of up to 10% for the commercialization of their products, and in cases where financing was obtained an average of 13%. The largest firms have their own US-based distributors such as Signature and Crispi-Products. Thus, the two Mexican organic sub-sectors sell to different markets: large producers primarily contract with large US distributors for specified quantities, while small producers make use of other networks or Fair Trade buyers (see also Reynolds, 2004).

To summarize, differences discussed above show the emergence of political and social differentials between agribusiness-organic large landowners in fertile flatlands and mostly indigenous smallholders in the mountains. The organic movement’s fair-trade ties leave open the possibility of using certification and production practices to address social inequality in the Mexican context (see Taylor, 2005). Southern Mexican peasant-indigenous lifeways enable more rapid conversion to certified organic production, providing a sort of comparative advantage. Large producers in other areas of Mexico, however, are able to construct an advantage by gaining privileged market access through contracts, reducing input costs through cheap wage-labor, making use of international financial and distribution networks, and using input-oriented technology to maximize yields. Below we explore the implications of the coexistence of capital-intensive input-model production and labor-intensive ecologically motivated production.

4. Implications for organic certification

Previous sections have documented the division of Mexican certified-organic agriculture into large and small producers and shown how this takes both economic and technological forms. This section will focus on certification as a technological practice. We will show how certification itself takes distinct forms depending upon producer type and argue that this difference can reinforce the social and economic advantage of large producers. First, certification differs with respect to the technical organization of inspections. Second, the process-based organic of small farms versus the input-based organic of large farms leads to differences in terms of what constitutes evidence of standards compliance. Third, certification support networks, including certification agencies, differ for large versus small farms; large farmers depend upon international business links and certifiers, while small farmers depend on national certifiers and regional farmer organizations. Finally, we argue that state institutional support can play a critical role in supporting small-scale farm organic and its respective cultural, social justice, and environmental contributions.

4.1. Certification practices of large and small producers

The certification process involves two main stages: inspection and certification. Inspections refer to the inspector’s field review of the farm operation that takes into consideration: (a) the production process through field visits, (b) processing and management through inspections of warehouses and post-harvest processing, (c) administrative control ascertained through review of sales and harvest documents (Gómez Tovar et al., 2001, p. 40). Nevertheless, as Chart 1 demonstrates, these processes differ between large producers, who undertake individual farm certifications, and small producers, who typically must group certify to control certification costs.

Here we describe the typical internal and external monitoring mechanisms of small and large producers and show that small and large producers organize certification activities in drastically different ways.

4.1.1. Internal monitoring

For small producers, the internal control system is comprised of cross-inspections by ‘peasant inspectors’ in which the ‘village extension agents’ of one village travel to inspect the farm-plots of organic producers in different villages that are members of a distinct regional organization. These village-level personnel are accredited by certifying agencies under ISO Guide 65 accreditation norms and perform field inspections and document review for 100% of organic producers each year. Producer organizations must keep dozens of certification documents updated, including 5 at the household level, approximately 10 at the village level, and 20 at the regional level (Mutersbaugh, 2004). Large producers employ technical assistants to organize

<i>Large Producers undertaking individual certifications</i>	<i>Small producers undertaking group certifications</i>
Producer requests information from the certifying agency	Producer organization requests information from the certifying agency
Certifying agency sends application materials	Certifying agency sends application materials
Producer makes application	Producer organization makes application
Certifying agency reviews the application	Certifying agency reviews the application
	Producer organization designates community technical officer, farmers make organic farm plans
A certification contract is signed	A certification contract is signed
	Internal (village) inspectors inspect 100% of farm plots
	Internal inspection reports are sent to regional, then statewide review by producer group approval committees
	Reports are compiled and sent to certifying agency
The certifying agency selects an inspector	The certifying agency selects an inspector
External inspector visits producer	External inspector inspects 20% of producer organization farm plots
The inspector's report is reviewed by certification committee of certifying agency	The inspector's report is reviewed by certification committee of certifying agency
Certification decision reached	Certification decision reached
If decision in favor of certification, certifying agency sends certification papers to producer(s)	If decision in favor of certification, certifying agency sends certification papers to producer(s)
Reports are sent during the harvest and sales process including producer(s) reports, inspection reports, certification renewal reports	Reports are sent during the harvest and sales process including producer(s) reports, inspection reports, certification renewal reports

Chart 1. Steps to organic-product certification. Sources: Rundgren, 1998:28, Mutersbaugh 2004.

internal certification issues and to deal directly with certification agencies. These employees organize documents, receipts, and materials and translate when necessary, but do not engage in inspections themselves. If a crop is found to be contaminated, firms have been known to hire guards to watch fields at night, collect and analyze additional samples, and to re-inspect machinery. The different compliance and surveillance practices allowed under existing certification norms require radically different cost and labor structures between firms and organizations.

4.1.2. External monitoring

For small producers, independent third-party inspectors perform random inspections of 10–20% of smallholder plots (depending on the certifying agency) and verify all organization documents. These visits take from 3 to 20 days depending on the number of producers that must be visited in each regional organization. Small producer organizations are required to document internal regulations, producer lists, maps of each certified plot, producer admission requests and corresponding organic-program approvals, farm improvement plans and internal inspection reports for each organic producer, organic cultivation histories, producer work plans, internal-inspector accred-

itations, documentation for training programs provided to producers, internal inspectors and community technical officers, and documents showing commodity transactions (warehousing, processing and sales receipts), among others. For large producers, technical assistants deal directly with certification agencies and their inspectors, as described above. External inspections require far less time, 1–2 days on average, and focus on verifying purchased inputs and analyzing labels rather than field visits. Shorter distances between fields and more homogenous cultivation conditions allows for faster evaluations of compliance. Like small producers organizations, large producers are required to document field maps of crop distributions, cultivation histories, and registers of harvest and sales, but also document lists of inputs used and their labels, schedules of equipment cleaning and lab analyses of water, soil, and occasionally crop samples.

4.2. Implications of divergent certification practices

While the heuristic separation of internal and external inspections here might imply nested spheres of interaction, in reality the demands of and for international standards and the daily practice of organic farming intersect at all levels. First, internal inspectors are themselves accredited

according to international standards. Second, surveillance is not limited to formal inspections but is performed continually by community members and neighboring communities (Mutersbaugh, 2002). For small producers in particular, infractions committed by a single farmer can lead to the decertification of the whole producer zone, which includes any number of producers. The anecdotes opening the paper illustrate this difficulty. Third, farming activities are sedimented in documents and paperwork through the procedures required by Northern-based certification frameworks. This documentation is supposed to make organic farming practices visible and, therefore, comparable to other organic products across space and time. This process creates a particular kind of knowledge of the spaces certified, as constructed by interactions between producers, inspectors, certification agencies, accreditation agencies, and buyers. As the area of organic cultivation expands to include more products and approaches, the principle of comparability becomes more burdensome. Below we explore the impacts of these changes on producers.

Certification practices for small producers must demonstrate the conditions of production through observation, while large producers simply prove the absence of non-organic agro-chemicals through documentation. Additionally, training and accrediting peasant inspectors, paying for their transportation to other communities, and then copying, reviewing, and ordering before external inspection is costly in labor terms, though it decreases monetary costs of external inspections. This division recalls the larger debate within the organic movement around the shift from a “movement-oriented organic” agriculture (organic understood as an evolving interaction between local social and ecological conditions) to a “market-oriented” agriculture (organic understood as non-chemical inputs) and leads us to question whether the large agribusinesses described here *practice* organic agriculture or only shift from synthetic to natural inputs (Raynolds, 2004).

The internal inspection aspect of small producer certification requires that labor be marshalled year-round to handle the administrative needs of certification. Mutersbaugh (2002) estimates that regional organizations alone require up to 40 labor days yearly from organization leaders, a service that is rarely paid because of indigenous service norms. These cargo-based communal labor norms usually rotate between people on a yearly basis, but since training and accreditation are costly, few people in each village complete the process. Thus, the duties do not rotate and the inspectors’ household income and ability to participate is affected. Further, the inspectors must speak across communal and bureaucratic service paradigms, at times endangering the certification process due to constraints placed on conversation (Mutersbaugh, 2004).

While costly, small producers are afforded some advantages in their methods of certification. As organized groups, they are able to produce sufficient quantities to interest international buyers and to achieve some econo-

mies of scale in transaction and shipping costs. Internal controls provide producers with technical assistance, problem identification, processing assistance and language training within the context of the organization and community. Capacities built through democratic decision-making and management activities within producer cooperatives and the increased income from premium prices transfer to other rural initiatives, such as communal development projects, health and education programs, training centers, credit associations, insurance and savings, roads, community food stores, and so on.¹⁰

For their part, large producers’ reliance on purchased, high cost inputs to access premium prices does not guarantee the long-term sustainability of organic production in Mexico. Uncommitted to the philosophical aspects of the organic movement, these producers can revert to conventional production should organic production fail to provide premium prices or access to niche markets. Following on the market-oriented philosophy, bureaucratic and administrative capacity is simply hired. Thus, capacity is not attached to the farm, but to a position or person such that the possibilities for social benefits are blocked. Thus, institutional knowledge is less entrenched in the large farm or producer, leading to a shallow sense of commitment to organic production and to the neglect of the social justice concerns associated with movement-oriented organic farming.

In part, an analysis of the difference in organizational and spatial structure should logically predict the disparity between large and small producers. Producer cooperatives are juridically defined as such, with accompanying requirements as to democratic structure and participation. Firms, on the other hand, are privately held with few requirements as to internal governance and public accountability. Further, producer cooperatives aim to certify a large number of dispersed plots within larger, non-certified spaces, so that internal controls are necessary because of the increased labor of certification, the various number and type of inputs that may be used, and to adequately control quality across diverse, mountainous terrains. Large producers generally produce on homogenous plots of land, rarely intercrop, and apply the same inputs to the entire crop so that the certified space is more compact. These geographic differences also affect the types of available and useful technologies, discussed throughout this paper.

The increasing bureaucratic burden weighs on different types of producers asymmetrically, such that credit, internal inspection, organizational needs, and actual production add mounting layers of responsibility for small producers, each layer involving surveillance from an

¹⁰Examples may be found in Oaxacan co-ops such as the Union de Comunidades Indígenas de la Región del Istmo (UCIRI) and the Coordinadora Estatal de Productores de Café de Oaxaca (CEPCO), in Puebla’s Cooperativa Tosepan Titataiske, and Chiapas’ Union Majomut, Sociedad Cooperativa Tzeltal Tzotzil, Indígenas de la Sierra Madre de Motozintla (ISMAM) and Campesinos Ecológicos de la Sierra Madre de Chiapas (CESMACH).

outside party. These bureaucratic requirements lead to the professionalization of administrative work for some cooperative members (Rice, 2001). While touted as capacity-building, the current context of certification in fact encourages the compartmentalization of knowledge within the organization. Further, some certification frameworks, such as the ISO Guide 65 rubric, do not allow sufficient flexibility to allow small producers to keep costs reasonable. Producers who do not have the economic or organizational capacity to pay for certification or implement effective internal control systems are barred from entering organic markets. As Gonzalez and Nigh (2005) note, the growing dependence of new cooperatives on the Despachos of the FIRA credit scheme, the increasing tendency to treat producer cooperatives as blueprint development models, and the neglect of the fundamental democratic and organizational capacity-building (which constituted the conditions of success in the early organic movement) have caused inspections to lose their supportive character. Fair Trade, in particular, is highly competitive, while multinational food companies are beginning to purchase or produce organic goods¹¹ have also taken up organic production (Sligh and Christman, 2003; *Organic Monitor*, 2003). Frequent changes in forms, procedures, and requirements (almost yearly) were reported disadvantages, these leading to bottlenecks in internal control procedures. This implicit preference for input-oriented agriculture imposes a single Northern definition of organic in such a way that traditional social inequalities are reproduced and firm inequalities deepened (Raynolds, 2004). For large producers, compliance verified through paperwork (receipts and lab tests) sidesteps the need for extended on-site surveillance. The expanding matrix of certification and accreditation directly privileges large companies who are able to soak up initial costs of transition to organic production, the certification process, and survive violations (Raynolds, 2004).

As national-level standards are harmonized with international certification procedures, consumer countries' policies will have a disproportionate impact on organic farming itself. California's influence in Mexico's organic sector, discussed above, demonstrates this dynamic. According to DeLind, the process of creating standards is an attempt to create a "single, manageable dimension" amenable to bureaucratic control and monitoring (DeLind, 2000, p. 200). Regulations on interpersonal relations, such as conversation, are examples of how these systems insert themselves between people and their experiences, which interrupts local governance and economic decision-making in the context of southern Mexico's village communal

structure (DeLind, 2000; Mutersbaugh, 2002). Harmonization leads to the sedimentation of certain norms, and this rigidity has significant impacts for producers: the flexibility afforded by internal control systems decreases as certification frameworks are generalized and applied across an increasing number of contexts. There remains a very real risk that the standardization of organic principles through Northern bureaucratic norms will re-entrench social inequalities in Mexico, creating barriers for new certified producers and increasing difficulties for existing producers.

The example of Mexico brings certain critiques to bear upon future analyses of the organic sector. First, the tendency to refer to "the organic movement" is common throughout the literature, yet organic production on the ground is less oppositional than ever before. Using this term implies that those involved in organic production share social goals, generally framed as shared philosophical beliefs in holistic, dynamic relationships between farmers and nature. Our use of Raynold's terms "movement-oriented" and "market-oriented" is intended to describe the philosophical divergence within the sector. Failure to differentiate producers masks the powerful presence of actors that are unconcerned with social or environmental ends and risks over-ascribing social and political agency to groups still struggling to be recognized. Analyses of organizational capacities or characteristics of success will mask the larger dynamics at work that may appear in more subtle, culturally embedded forms. As the Mexican case shows, developments within this sector need to be analyzed spatially, as social difference is embedded in a history of regional economic development and marginalization.

Leslie and Reimer (1999) argue for more explicit analysis of the production of space in and through commodity chains and for a treatment of chains as sites of meaning negotiation. The shifting landscape of Mexican organic agriculture from small, peasant-indigenous producers to a dualistic sectoral divide and the accompanying shifts in compliance practices indicates corresponding shifts in the meanings created and associated with organic production. The popularity of organic products largely relies on their image as socially responsible and environmentally conscious, and on the consumers ability to express these aspects of identity through consuming such products (see Klooster, 2005). Behind the label, market-oriented producers are displacing small producers in terms of profit share and land quantity. In addition, the increasing bureaucratic and administrative character of inspection has led to the current reality in which products are accredited, not producer philosophies (Gonzalez and Nigh, 2005), essentially emptying the label of the movement's original meaning. The profusion of eco-friendly labels has allowed firms to ride on the reputation of organic certification, on the organizational labor of earlier producers, and to capitalize on its current bureaucratic nature. In short, the market-oriented, large-scale producer sector discussed here profits from its association with small producers on grocery store shelves. Without a fair trade label, it is impossible to

¹¹Coca-Cola bought Odwalla Organics; Kellogg, Lightlife and Kashi; Kraft, Boca Burger; Mars, Seeds of Change; General Mills, Cascadian Farms and Small Planet Foods; H.J. Heinz, Acacia, Walnut acres and Earth's Best. Other organic market players include (Dole, Dean Foods, Parmalat, Danone, Sara Lee, Nestle, McDonalds, Unilevel, Archer Daniels-Midland, Cadbury, Novartis-tender, Harvest-Gerber).

distinguish between the movement- or market-oriented philosophies of organic farming.

The current division within organic production, in which the farm versus firm division includes not only production techniques but also certification strategies, crop selection, and market niches, will likely continue: smallholders will continue to dominate numerically and in total cultivation, although their share of the income may eventually slip below that of agribusiness. At issue are the larger social, cultural, and environmental paradigms motivating organic production and the degree to which organic certification supports or threatens those paradigms and their associated practices. Thus, smallholders may remain a political force, in numbers, though their economic contribution may wane. Unexamined here, however, are current migration dynamics of small producers. The real threat to organic smallholder production may lie outside the organic sector itself, especially if premium prices are not high enough to keep people farming.

4.2.1. A role for state policy?

This study has argued that Mexico's organic sector is, in fact, two sectors with two different and corresponding certification frameworks. In the current configuration, market and certification dynamics favor large producers despite their dependence on the image of the socially responsible product for access to premium prices. Given the success of government support in the US and EU, Mexico's organic sector would benefit from state assistance, but previous arguments about the bimodal organization of the sector indicate the need for legislation that is sensitive to historical and social inequalities. The Organic Product Law (*Ley de Productos Orgánicos*) is under revision, and was passed by one of Mexico's two legislative chambers on 26 April 2005. This law addresses the systemization of internal control systems for small producers, provide for the inclusion of participatory certification, seek growth in national organic markets, and implement a National Control System to establish the responsibilities of those involved in certification. Unresolved at this writing, however, is the degree to which the legislative measure will assist the small, cooperative organic farmers who comprise the majority of Mexican certified-organic producers. This law, we argue, should aim to assist this group in order to achieve long-term sustainability for this sector. For the most part, the Mexican government has viewed the organic sector as a source of foreign trade, and in terms of short-term economic gains. The core values of the organic movement, namely natural resource conservation and smallholder livelihood support, are not considered to be the primary advantages. Given this philosophical preference, the authors fear that the final version of the law will privilege large producers, which can capitalize on economies of scale and guaranteed contracts.

For this reason a national organic strategy is necessary to address the social justice implications of the growing duality of this sector. Coordination between local technical

assistance efforts, national certification systems, and international certification frameworks is vital to facilitate positive income growth and distribution in this sector. This paper has argued that the existing bimodal structure of Mexico's organic sector has led to a corresponding duality of certification frameworks, and that existing certification dynamics favor large agro-industrial organic producers over small peasant-indigenous producers. The final reading of the Organic Law will have profound effects on the daily practices of large and small organic producers, especially as growing bureaucratic requirements turn access and networking gaps between producers into barriers that hinder new small producers from obtaining certification. Growing disparity in income between large and small producers points directly to the possibility of a deepening of social, economic, and political inequalities between producers within the certified-organic agricultural sector. Timely and strategic involvement by the Mexican government in support of organic agriculture and small producers can go far in affecting widespread, lasting and positive changes for organic producers in Mexico.

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