

THE ORGANIC AGRO-EXPORT BOOM IN THE DOMINICAN REPUBLIC

Maintaining Tradition or Fostering Transformation?*

Laura T. Raynolds
Colorado State University

Abstract: The Dominican Republic has emerged as the world's foremost exporter of organic bananas and cocoa, a top exporter of organic coffee, and an export pioneer in new commodities like organic mangos. Pursuing a contextualized commodity network approach, I explain the rise of organic products within the broader forces fueling nontraditional agro-export growth and identify the key factors configuring organic export networks today. The article analyzes the implications of global organic market trends for Dominican exports and for the thousands of small producers involved. My research finds that despite their historical prominence, rising international competition and buyers' quality expectations are working to displace or disempower small Dominican organic producers. Strong producer associations and transnational movement ties are critical in shoring up the position of small organic producers in the Dominican Republic and may be similarly crucial in other Latin American countries.

INTRODUCTION

Global trade in organic foods has grown tremendously over the past twenty years. Once a marginal and localized food system, the organic sector is now one of the most rapidly growing segments of the global food market. World organic sales are valued at US\$28 billion and are increasing at 20 percent per year in major North American and European markets, though they account for only a small portion of internationally traded foods (Willer and Yussefi 2006). The rising popularity of organic foods in the global North and their increasing availability in mainstream supermarkets is generating a rapid increase in the volume and range of organic imports. There is now a booming South-North trade in organic tropical products, fresh and processed fruits and vegetables, and other items (Raynolds 2004). Latin America has emerged as a world leader in the organic export market. Almost all Latin American countries now export

* I gratefully acknowledge the John D. and Catherine T. MacArthur Foundation, Program on Global Security and Sustainability, for funding research presented here. I also owe thanks to José Horacio López, Zobeida Bonilla-Vega, and Aimee Shreck for their able research assistance, and to the Dominican organic producers, exporters, and association officials for their time and insights. The views presented here are the responsibility of the author alone.

certified organic foods, with Mexico, Brazil, Peru, Argentina, and the Dominican Republic leading this trend. Scholars and policy makers have remarked on the rise of Latin American organic exports, but there has to date been little detailed analysis of the organization or significance of this emerging sector.

This article addresses this lacuna, focusing particularly on the Dominican Republic, one of the most surprising leaders in the organic trade, given its small size and historically minor position in world food markets. I analyze the global, national, and local forces that have fueled organic exports from the Dominican Republic and the organization of production within key organic sectors—most important, bananas, cocoa, and coffee. Organic exports represent one strand of the expanding domain of Latin American nontraditional agricultural exports, a strand that responds directly to the rising need for new quality certifications in accessing high-value global food markets. This article investigates the ways in which the burgeoning organic export sector maintains, or potentially transforms, Dominican agro-export relations. Because organics are being touted across the region as one of the most promising contemporary export opportunities, this research has policy implications for countries throughout Latin America.

This study pursues a contextualized commodity network approach. It builds on a commodity chain (Gereffi 1994; Gereffi, Humphrey, and Sturgeon 2005) analysis of the location of Dominican enterprises in the economic organization and the governance of organic commodity circuits. Yet my investigation expands this analytical framework by deepening analysis of the political and social, as well as economic, factors that internally organize organic commodity networks and by contextualizing the analysis of organic exports within the broader political, economic, and social forces that shape production and trade. Focusing on the case of the Dominican Republic, this article addresses three key questions: (1) What are the factors that have promoted the rise and persistence of the organic export sector? (2) What are the implications of shifting trends in the global organic trade for this sector and for participating enterprises? (3) What are the implications of participating in organic agro-exports for producers and how have these changed over time?

This study offers a rare longitudinal and empirically grounded analysis of organic export production in Latin America, integrating international-, national-, and firm-level data. Because most conventional sources of agricultural production and trade statistics do not distinguish organic from nonorganic commodities, at the international level I rely on survey data collected by multilateral agencies, industry groups, and movement organizations. My analysis of the national organic sector draws on government statistics that are more readily available in the Dominican Republic than in most countries. This data is supplemented with numerous governmental and nongovernmental organization reports and trade journal ar-

ticles. At the firm level, I rely on personal interviews undertaken in 1990, 1997, and 2003 with officials of key organic export firms and organizations operating in the Dominican Republic.¹

ORGANIC EXPORTS: ANALYTICAL DIMENSIONS

Over the past twenty-five years, neoliberal policies and globalization processes in Latin America have reshaped agriculture, curtailing domestic food production, heightening competition in traditional agro-exports, and spurring the search for new export opportunities. These changes are linked to an overall decline in the Fordist national model of mass market food production and consumption (Friedmann and McMichael 1989). Latin American agriculture has shifted away from basic foods produced for the national majority and toward specialty items oriented to the wealthy consumer minority in domestic and, more important, international markets.² Since the mid-1980s, production of nontraditional agro-exports—including exotic fruits, specialty vegetables, and counterseasonal produce—has increased greatly in the Dominican Republic (Raynolds 1994, 2001) and in other Latin American countries (e.g., Barrientos 1997; Carletto, de Janvry, and Sadoulet 1999; Hamilton and Fischer 2003). As numerous studies document, nontraditional agriculture engages new commodities, new markets, and new production relationships.³ Certified organic exports represent a distinct new strand of the nontraditional agro-export sector, a strand that has to date received little attention.

A commodity chain framework provides an insightful avenue for analyzing production and distribution arrangements in nontraditional exports. Gereffi (1994) elaborates on this approach by focusing on (1) the linking of products and services in sequential value-added activities, (2) the social and spatial organization of enterprises in production and marketing networks, and (3) the power relations determining resource allocation along the commodity chain. Initially conceived in relation to industrial exports, commodity chain analysis has proved insightful in revealing the configuration of agricultural exports (Ponte 2002; Raynolds 1994; 2004; Talbot 2002). Research in this tradition focuses largely on the intensification and shifting nature of corporate control over production and profits. Gereffi (1994) argues that while commodity chains have traditionally been “producer-driven,” given producer control over capital and proprietary knowledge, they are becoming increasingly “buyer-driven”

1. My 1990 interviews stumbled upon the country's first organic exports. Later interviews were designed to document this area's growth.

2. These changes in agriculture in many ways mirrored changes in industry, where import substitution industrialization was replaced by export manufacturing.

3. The literature on nontraditional agriculture is extensive; cited studies reflect key research topics as well as those of regional relevance.

because of the rising market control of brand-name distributors. The buyer-driven phenomenon in food is clearest in the United Kingdom, where a few powerful supermarkets dominate sales and tightly control their supply chains (Dolan and Humphrey 2000).

While commodity chain research highlights the power of dominant corporations, analyses of shifting "quality" assessments in the food sector provide a complementary focus on the social factors that shape production. Convention theory analyzes the social values, norms, and rules that define and uphold distinct definitions of quality (Thévenot 1995). Within the food sector, markets for specialty items distinguished by qualities such as their organic, local, heritage, biodynamic, or fair trade nature are booming (Murdoch et al. 2000). Although quality in mainstream agro-industrial foods is distinguished largely by standardization and price criteria, organic quality is defined by environmental and social sustainability criteria (Raynolds 2004). Rising consumer demand for organic foods reflects an increasing social valuation of these alternative qualities. The popularity of organic foods is fueled by consumers' mounting concerns over the chemical residues, antibiotics, hormones, and genetically modified organisms found in conventional foods and their fears associated with large-scale outbreaks of mad cow disease and *E. coli* contamination (Wilkinson 2002). Consumers around the world select organic products because they view them as healthier for their families, for farmers, and for the environment (FAO 1999a).

Though analysis of growing organic and specialty food markets typically focuses on individual consumer preferences, collective social action is central in defining and promoting new commodity standards. New food-quality standards link issues of food safety, taste, and health with a range of social and environmental production concerns. Certification systems have been established to ensure adherence to the new production process criteria. The most rapid rise is in certifications involving third-party organizations (Gereffi, Garcia-Johnson, and Sasser 2001; Raynolds et al. 2007a).⁴ In organic foods, as in other sectors, nongovernmental organizations have played a key role in developing standards and verification procedures (Guthman 2004). Though third-party certification is often characterized as a system of voluntary private governance (Cashore, Auld, and Newsom 2004), organic certification is increasingly necessary for products destined for growing specialty markets and is increasingly regulated by state institutions.

New certification systems reshape the power relationships within commodity chains. Historically, organic production-consumption relationships involved proximate exchanges and tight social ties, creating what

4. Certification is growing most rapidly in agricultural and natural resource products where ecological and social concerns intersect, like food, timber, and flowers.

Gereffi, Humphrey, and Sturgeon (2005) call "relational" chains. Yet over the past decade, the meaning of organic quality has been simplified to refer largely to a ban on agrochemical inputs, standards have been formalized and codified via certification systems and increasingly by law, and markets have grown such that suppliers are drawn increasingly from among peasants in the global South (Raynolds 2004). According to Gereffi, Humphrey, and Sturgeon (2005), this simplification and codification of supply transactions and the integration of more marginal producers can be expected to increase the power of buyers and foster "captive" or "vertically integrated" supply chains.⁵ Some recent studies support this hypothesis, positing that powerful buyers are undermining small producers in organic coffee chains (Gómez Tovar et al. 2005; Muradian and Pelupessy 2005; Mutersbaugh 2002).

While a commodity chain approach highlights shifting interfirm relationships, the investigation undertaken here adopts a more multifaceted commodity network approach, emphasizing the political and social, as well as economic, facets of organic export growth. A commodity network approach deepens my analysis by incorporating both the political actors and actions that shape organic certification and trade and the social actors and actions that shape organic commodity relations, including potentially important nongovernmental organizations and social movement activities.⁶ As the network terminology suggests, this study adopts a less economically deterministic outlook than is commonly found in the commodity chain literature. Analyzing the role of social and political as well as economic actors, this study investigates whether corporate distributors are increasing their power over Dominican organic export producers, as commodity chain models propose, or whether noneconomic factors mediate these structural tendencies.

The framework proposed here further strengthens the understanding of commodity networks by analyzing the embedded nature of commodity relations within broader political, economic, and social arenas. Expanding analysis beyond the internal features of the organic commodity network, this study investigates the forces that have given rise to and have maintained the Dominican organic export sector. Explaining the country's prominence in the organic trade, given its historically minor role in international food markets, requires careful analysis of the national and local forces that have promoted these new commodities as nontraditional exports. This contextualized understanding is critical to investigating the implications of organic export growth for processes of development in the Dominican Republic and for particular firms engaged in this sector. It is

5. Gereffi et al. (2005) argue that buyer-supplier inequalities are fueled by (1) supply transaction complexity, (2) ability to codify transactions, and (3) supplier capability limitations.

6. For a theoretical elaboration of a commodity network approach, see Raynolds (2004).

even more central for understanding the implications of participation in organic export for small producers whose livelihoods depend on these new crops.

THE RISE IN DOMINICAN ORGANIC EXPORTS⁷

Throughout Latin America peasants have long practiced low-input forms of cultivation that resemble what is now known as organic agriculture. In the Dominican Republic, peasant farming practices and limited chemical input use have historically been maintained by ecological and economic factors. The impetus to apply chemical controls in agriculture has historically been weaker in the Dominican Republic than in many parts of Latin America because of its island ecology and varied microclimatic regions, which together limit plant diseases and pests. While agricultural modernization was heavily promoted in the 1960s in a few irrigated regions of the country, greatly increasing chemical use among some producers, many peasants have been too poor to purchase large quantities of agrochemicals. Traditional peasant practices for maintaining soil fertility and reducing crop losses (e.g., intercropping and low-till techniques) are still widely utilized, particularly in poorer, more mountainous regions (Siegel and Alwang 2004). The central features of what is now called organic agriculture—the reliance on natural methods of enhancing soil fertility and resisting disease and the rejection of synthetic chemical fertilizers, pesticides, and pharmaceuticals—have thus been historically maintained in the Dominican Republic.

In recent decades, foreign individuals and organizations have played a fundamental role in promoting formal organic practices in the Dominican Republic, as in other parts of Latin America (IFAD 2003). In the early 1980s, European and North American nongovernmental organizations introduced organic farming into their integrated rural development and appropriate technology programs (Helvetas 2001). These small-scale initiatives provided peasant training in organic techniques oriented largely toward combating soil erosion and increasing household food production in impoverished regions. Early organic advocates were committed to movement ideals and promoted organic farming as a way to protect the earth and peasant food security, with little regard for marketing or certification (Junta Agroempresarial Dominicana [JAD] 1999). Rising world oil prices and associated agricultural input prices in the late 1980s reinforced *de facto* organic production among Dominican producers and development organizations' interest in low-input farming.

7. Where not otherwise specified, the information presented in this and subsequent sections derives from interviews with managers of key Dominican organic export firms and organizations.

The Dominican economic crisis of the late 1980s and state policy responses reoriented organic agriculture toward the export market within the context of the broader promotion of nontraditional exports. As elsewhere in the region, structural adjustment and neoliberal policies shifted state support away from production for the domestic economy toward new agricultural and industrial export sectors. The Dominican government established legal and economic incentives to promote nontraditional exports to compensate for the declining earnings of historically dominant commodities like sugar.⁸ While the initiation and subsequent rise of Dominican nontraditional manufacturing exports has been widely noted, less well known is the related increase in nontraditional agricultural exports. Government policies, along with the availability of cheap land and labor, encouraged an influx in foreign as well as domestic investments in a wide range of new export crops. Major nontraditional agro-exports included items such as pineapples, which were already produced and had well-established international markets, and Chinese eggplants, which were previously unknown and required the creation of new international markets (Raynolds 1994).

The Dominican Republic's first commercial organic exports emerged within the expansion in nontraditional exports aimed at relatively high-priced niche markets for specialty foods. By 1989 half a dozen firms, employing both foreign and domestic personnel and capital, were producing a range of organic exports on 800 hectares around the country (Olivo 1989). While many organic export pioneers were inspired by movement ideals, they were also motivated by the strength of world markets. In contrast to the competitive markets and declining prices faced by traditional undifferentiated commodities like sugar, Dominican organic exports encountered relatively uncompetitive and lucrative international markets. Organic export production was, in this period, estimated to be two to three times more profitable per hectare than traditional agro-export production (Junta Agroempesarial de Consultaría y Coinversión [JACC] 1990). Some organic exporters from the outset hired foreign agencies to monitor, certify, and label their products, though certification was not at the time required. In subsequent years, the use of organic certification to differentiate commodities and to ensure access to organic premiums became widespread among exporters. Formal certification guaranteeing compliance with national and international organic standards is now legally required in all major markets.

During the 1990s, Dominican organic exports expanded and became institutionalized with the support of mainstream donor, business, and

8. Nontraditional exporters in the Dominican Republic have received import tax and duty exonerations, income tax credits, state subsidized loans, and other services (Raynolds 1994).

government agencies. While early support came from small, progressive development groups focusing on household food production, in recent years, the United Nations, multilateral donors, and foreign government agencies have provided substantial financial and technical assistance for organic export production, certification, and marketing (Helvetas 2001). A number of local development organizations have provided training in organic agriculture (Damiani 2002). The Dominican Organic Agricultural Association was founded in 1996. Given their acceptance in conventional business arenas, most organic exporters are also members of the top Dominican agribusiness association, which established an Organic Committee in 1997 (JAD 1998). Organic exports have also been supported by various Dominican government agencies since the mid-1990s. The Secretariat of Agriculture established an organic division that provides extension and research services. The Dominican Center of Export Promotion has also fostered exports of organic products. Reflecting government support for organic exports, the Dominican Republic is one of the few countries in the world to distinguish organic from nonorganic commodities in official trade statistics.

Today the organic export sector represents an important segment of Dominican agriculture and the national economy. Organic farming, once practiced informally by peasants seeking to feed their families, has given way to formally certified production destined largely for export. The Dominican Republic now has 14,000 organic growers, one of the largest organic sectors in Latin America. As table 1 demonstrates, only Mexico and Peru have more organic producers than the Dominican Republic. With seventy-two thousand certified organic hectares, the Dominican Republic devotes almost 2 percent of its agricultural land to organic production, the second highest amount in the region. Certified organic exports from the Dominican Republic generate about US\$30 million per year. While a few other Latin American countries have higher organic export earnings, the relative importance of these earnings for the Dominican economy is far greater than for larger, more diversified countries, as table 2 demonstrates. Organic products account for more than 4 percent of all Dominican agro-export earnings, representing .5 percent of total export revenues and .1 percent of the national economy.

Although the Dominican organic export sector is small, its national and regional prominence suggests the importance of more detailed analysis. The rise of organic agriculture and certified exports in the Dominican Republic is partially mirrored across Latin America. Yet the share of producers, land area, and earnings involved make the Dominican case stand out. The historical analysis already presented contextualizes the emergence of the Dominican organic sector within the national and international political economic forces that fueled the growth in nontraditional exports. Organic food exports are often identified by journalists, development

Table 1 Latin American Certified Organic Production and Exports

Country (data year)	Organic growers ^a	Organic hectares ^a	Organic % of total ag. land ^a	Major organic exports ^b
Mexico (2005) ^c	120,000	295,000	0.27	Coffee, corn, sesame, vegetables
Peru (2004)	23,500	260,000	0.83	Coffee, cocoa, bananas, cotton
Brazil (2005) ^d	14,000	888,000	0.34	Soybeans, sugar, oranges, coffee
Dominican Republic (2004) ^e	14,000	72,500	1.96	Bananas, cocoa, coffee, mangos
Bolivia (2002)	6,500	364,000	0.99	Cocoa, coffee, nuts, quinoa
Colombia (2003)	4,500	33,000	0.07	Coffee, palm oil, sugar, bananas
Costa Rica (2004) ^f	4,000	14,000	0.49	Coffee, cocoa, bananas, orange juice
Honduras (2003)	3,000	2,000	0.06	Bananas, coffee
Guatemala (2003)	3,000	15,000	0.33	Coffee, sesame, spices, vegetables
Paraguay (2002)	3,000	91,500	0.37	Soybeans, sugar
Ecuador (2005)	2,500	27,500	0.34	Bananas
Nicaragua (2004)	2,000	59,000	0.83	Coffee, sesame, cocoa, cashews
Argentina (2005) ^g	2,000	2,800,000	1.58	Corn, wheat, beef, pears,
El Salvador (2005)	1,000	9,000	0.53	Coffee, cashews, sesame
Chile (2005) ^h	1,000	639,000	4.19	Lamb, apples, kiwis, cherries

Note:

- a. These figures are from Willer and Yussefi (2006).
- b. Top exports are from Damiani (2002), Lernoud (2006), and listed country sources.
- c. Additional data are from Gomez Tovar et al. (2005).
- d. Additional data are from Borges da Fonseca (2002) and Fonseca and Wilkinson (2003).
- e. Additional data are from CEDOPEX (2002, 2006) and Damiani (2002).
- f. Additional data are from Damiani (2002).
- g. Additional data are from Balbi (2002) and CAPOC (2001).
- h. Additional data are from ProChile (2001).

Table 2 *Top Latin American Organic Export Producers*

Country	Organic exports (US\$1,000) ^a	Organic exports as % of total ag. exports ^b	Organic exports as % of total exports ^b	Organic exports as % of GNP ^c
Mexico ^d	280,000	3.48	0.16	0.04
Brazil ^e	100,000	0.60	0.14	0.02
Peru ^f	30,000	3.88	0.32	0.06
Argentina ^g	30,000	0.27	0.11	0.03
Dominican Republic ^h	27,000	4.47	0.48	0.13
Chile ⁱ	4,000	0.11	0.01	0.01

Note:

- a. Export values are for 2002 and are from listed country sources.
- b. Calculated using World Bank figures.
- c. Calculated using World Bank figures for Gross National Income (GNI), a GNP equivalent.
- d. Export value from Lernoud (2005).
- e. Total value from Lernoud (2005); estimated 50-percent value exported from Borges da Fonseca (2002).
- f. Export value from Lernoud (2005).
- g. Export value calculated from Balbi (2002).
- h. Export value from CEDOPEX (2002).
- i. Export value from ProChile (2001).

agencies, and government officials as one of the most promising segments of the Dominican export economy (e.g., *Hoy* 2005). Assessing the organic sector's prospects requires a more detailed consideration of the nature of key commodities and their fit within expanding global markets for quality foods.

ORGANIC EXPORT COMMODITIES AND MARKETS

Over the past fifteen years, the Dominican Republic has been at the forefront of the booming international trade for certified organic commodities. Organic food consumption is increasing around the world, with Europe and North America leading the market with annual purchases worth US\$14 and US\$13 billion, respectively (Willer and Yussefi 2006). Imported commodities are playing an increasingly important role in these markets, helping to satisfy mounting demand for organic product variety and volume, particularly in the growing supermarket sector (Raynolds 2004). The most significant recent growth in the organic trade has been in certified tropical foods, counterseasonal fresh produce, and processed fruits and vegetables. Dominican exports have, over the years, played a central role in creating and supplying these new markets.

Table 3 Dominican Organic Export Values (FOB US\$1,000)

Product	1997	1999	2001	2003	2005
Bananas (fresh)	2,361	8,051	20,471	19,501	23,329
Cocoa (beans)	2,044	3,454	3,323	7,492	2,872
Cocoa (processed)	159	248	679	1,437	718
Coffee (green)	550	668	402	233	116
Coffee (roasted)	0	0	0	52	57
Mangoes (fresh)	0	0	68	132	147
Lemons (fresh)	0	0	23	77	80
Coconut (oil)	16	14	8	35	58
Coconut (dried)	0	25	105	89	24
Plantains (fresh)	0	0	0	131	45
Peppers (fresh)	0	0	0	9	14
Pineapples (fresh)	0	0	120	217	13
Other	0	256	174	147	7
Total	5,130	12,709	25,373	29,552	27,481

Sources: Data compiled from Solis (1999) and CEDOPEX (2001, 2004, 2006).

The Dominican Republic's earliest organic exports were major tropical commodities. As world markets for traditional Dominican agro-exports (in particular sugar, coffee, and cocoa) declined, producers sought to reorient these commodities toward niche specialty-goods markets. Exports of Dominican organic cocoa and coffee began in the early 1990s. Yet organic conversion was not automatic. Sugar, the Dominican Republic's top traditional export, has not become a major organic export, whereas bananas, which are defined as nontraditional given the nation's limited historical reliance on this crop, have emerged as an organic mainstay.

Dominican organic export values and volumes increased more than fivefold between 1997 and 2005. As tables 3 and 4 demonstrate, widely traded tropical commodities have been at the forefront of organic exports throughout this period, though growth in these products has recently slowed. The first official export figures (in 1997) specified the top five organic items: bananas, cocoa, coffee, cocoa derivatives, and coconut oil. Organic bananas and cocoa were the early front-runners. Banana exports grew dramatically in the 1990s and remain by far the most important organic product, with 63,000 metric tons, valued at more than US\$23 million, exported in 2005. Certified cocoa beans and processed derivatives also remain among the top Dominican organic exports, though values and volumes have recently faltered. Organic coffee has been similarly important, but exports have hit a plateau.

A range of new fresh and semiprocessed fruits, vegetables, and nuts have joined the Dominican organic sector, slowing the deterioration in export earnings and volumes. Fresh mangos, lemons, and plantains lead

Table 4 *Dominican Organic Export Volumes (metric tons)*

Product	1997	1999	2001	2003	2005
Bananas (fresh)	11,766	28,195	68,322	60,091	62,814
Cocoa (beans)	1,442	2,125	2,737	3,832	1,675
Cocoa (processed)	43	136	371	530	298
Coffee (green)	164	202	171	119	42
Coffee (roasted)	0	0	0	10	29
Mangoes (fresh)	0	0	142	220	219
Lemons (fresh)	0	0	34	125	87
Coconut (oil)	71	45	34	162	207
Coconut (dried)	0	137	326	569	63
Plantains (fresh)	0	0	0	347	339
Peppers (fresh)	0	0	0	12	8
Pineapples (fresh)	0	0	90	420	38
Other	0	285	228	324	23
Total	13,486	31,125	72,455	66,761	65,842

Sources: Data compiled from Solis (1999) and CEDOPEX (2001, 2004, 2006).

these exports. These nontraditional products were previously sold in non-organic markets only in very small amounts. In fact, these produce items (whether organic or not) are not major internationally traded commodities. While organic lemons help diversify general retail offerings, organic mangoes and plantains push certified products into more specialized markets (FAO/ITC/CTA 2001). Dominican exports of semiprocessed items, such as dried coconut and coconut oil, have also recently expanded, though slowly. Destined for the rapidly growing organic processed-food market, these items counter the country's traditional reliance on unprocessed exports.

Most Dominican organic exports go to just a few countries, as table 5 demonstrates. Although the Dominican Republic has traditionally been highly dependent on the U.S. market, organic goods are exported largely to Europe as a result of that region's dominance in the organic market and favorable trade policies. The transatlantic trade was initially fostered by the Dominican Republic's 1989 acceptance into the Lomé Agreement, which grants preferential access to European markets. Europe has consistently imported about 90 percent of Dominican organic products, though country shares have shifted with time. In 1997, Holland and Belgium dominated imports; in 2001, the United Kingdom and Belgium were the lead importers. In 2005, the United Kingdom imported fully 75 percent of all Dominican organic exports, while the United States imported 4 percent and Japan about 1 percent.

The Dominican Republic is the world's largest exporter of organic bananas, supplying 60 percent of the global market and up to 75 percent of the European market (Damiani 2002; FAO 1999b). The Dominican Republic

Table 5 Top Destinations of Dominican Organic Exports

Country	Percent of Total Organic Exports by Value		
	1997	2001	2005
United Kingdom	0.0	34.7	75.0
Belgium	23.6	31.7	7.5
Italy	< 0.1	2.6	5.3
United States	12.6	8.2	4.0
Holland	46.0	6.9	2.9
Japan	0.0	0.2	0.9
Germany	14.9	9.7	0.9
Spain	0.0	0.3	0.5
France	0.0	< 0.1	0.4
Puerto Rico	< 0.1	< 0.1	0.2
Total	97.6	96.6	97.7

Sources: Data compiled from CEDOPEX (1999, 2002, 2006).

lic has never been a major supplier of conventional bananas and currently almost half of all exports are certified organic (CEDOPEX 2006). The country's export prominence is due in large part to its early market entry and its success in meeting escalating European demand. When the Dominican Republic began shipping organic bananas in 1989, pioneers report that they had to create demand and trade channels. When organic banana sales soared in the mid-1990s—leading the global organic market with growth rates of more than 30 percent per year (FAO 1999b)—exporters were able to expand already-established production and marketing networks. In the early years, most organic bananas were exported to Belgium; by 2000, the United Kingdom had emerged as the major market destination, now purchasing 83 percent of Dominican organic bananas. The remaining bananas go to other European countries or to the United States and Japan (CEDOPEX 2006). Global demand for organic bananas is still rising at about 20 percent per year, but competition is rapidly intensifying as a result of the market entry of banana export leaders like Ecuador, Colombia, and Costa Rica, which now produce organic bananas on a large scale for transnational corporate brands like Dole Foods (Raynolds 2004).

The Dominican Republic is also the world's foremost exporter of organic cocoa, currently supplying 60–80 percent of the market (Garibay 2006). Though cocoa is a traditional export, the Dominican Republic has a much stronger position in the organic market than in the conventional cocoa market—where it has only a 2 percent share (Siegel and Alwang 2004, 28). Currently 10 percent of all cocoa exports are certified organic (CEDOPEX 2006). Dominican success in organic cocoa is, as in bananas, due largely to its pioneering role. Exports in the 1990s contributed to the

emergence of the organic cocoa market and have grown along with the 16–20 percent per year demand increase (Garibay 2006). Organic cocoa is sold in a number of countries: Italy leads with 36 percent of exports, followed by the United States with 16 percent (CEDOPEX 2006). The organic cocoa trade is becoming more competitive as small and medium cocoa producers from numerous Latin American and African countries convert to organic production (FIBL 2002).

Dominican organic coffee exports account for about 1 percent of the world market, making the country an important but not a lead supplier (ICO 2003). Coffee (like cocoa) is a traditional export, and again the country holds a stronger position in organic than in conventional sales (Siegel and Alwang 2004, 25). Five percent of Dominican coffee exports are organic. Seventy-two percent of this coffee is sold in Germany, followed by 27 percent in France percent (CEDOPEX 2006). The Dominican Republic began exporting organic coffee at the same time as bananas and cocoa, but Mexico and Peru had already established their market leadership. World organic coffee demand continues to rise at 15 percent per year, but supplies are growing even more rapidly, with small, medium, and large coffee producers from twenty-seven countries competing for market shares (FIBL 2002).

The Dominican Republic is also a key supplier to increasingly diversified organic produce and processed-foods markets. The major new fresh produce exports are destined for Europe: mangos are sold largely in Belgium, plantains in Italy, and lemons in the United Kingdom (CEDOPEX 2006). New items are continuously added to the roster of organic produce, with exports in 2005 including certified peppers, pineapples, eggplants, papayas, and oranges. The Dominican Republic has exported processed organic coconut for a number of years, largely to Puerto Rico. Only a few new items for the processed-food industry have been introduced, such as organic tropical fruit puree. These new more diverse organic products enter some of the least competitive and most rapidly growing segments of the market (FAO/ITC/CTA 2001).

Although the Dominican Republic has been quite successful at entering new organic specialty-food markets, analysis of recent export data reveals significant variation over time. Top organic products emerged within the overall rise in nontraditional agro-exports in the 1990s. Export promotion policies appear to have stimulated nontraditional banana exports more than other products, but new organic specialty varieties of traditional bulk exports like cocoa and coffee also emerged early. European organic market strength and preferential trade agreements fostered the transatlantic organic trade. While these political economic trends explain the early and continued emergence of Dominican organic exports, to understand why established products are now faltering, this analysis turns to consider institutional relations within organic commodity networks.

INSTITUTIONAL RELATIONS IN ORGANIC EXPORTS

In the 1980s and early 1990s, conversion to organic agriculture by Dominican producers was relatively easy. Producers were typically practicing low-input, often de facto organic, farming prior to their entry into formal organic farming. In coffee and cocoa, early organic producers in the mountainous interior had historically grown these crops with little reliance on chemical pesticides or fertilizers. Organic banana cultivation was established in the semiarid irrigated lowlands where major diseases like Sigatoka are rare. Early organic banana producers had previously pursued chemically intensive horticultural production, but by the late 1980s they had turned to low-input farming to combat declining profits and mounting pest problems.⁹

While establishing Dominican organic exports did not necessarily involve major changes in cultivation, it required establishing internationally sanctioned certification systems. As a pioneering banana exporter recalls, "When we came to this valley we found bananas already being produced organically. We organized the U.S. certification and were able to ship right away."¹⁰ Though certification was not required at the time, exporters (like this one) often hired expensive foreign agencies to certify and label their products to distinguish them from conventional items and promote their "clean image."¹¹ Certification became increasingly widespread over the subsequent years to ensure access to organic price premiums. Now all organic exports are certified in accordance with national and international standards, because such certification is legally required in destination markets.

For Dominican producers, organic certification is difficult and expensive. Organic certification requires adherence to rigorous production standards, documentation rules, and oversight procedures. For most Dominican producers, keeping the detailed farm records required for certification is difficult, given relatively low educational levels.¹² As a major organic exporter explains, "Certification is hugely expensive: we have to hire local semiprofessionals to help keep the records as well as the organic certifier." European certifiers predominate because agencies are selected on the basis of the strength of their reputations in destination markets. The Dominican government is currently seeking to streamline certification for

9. Crop choices and pesticide use in Azua, the first organic banana region, was at this time regulated by the state to curtail infestations of chemically resistant pests.

10. Since the 1990s, certification has required a mandatory "transition" period.

11. Dominican produce in this period was widely seen as "dirty" because of persistent chemical residue problems that led to a U.S. ban on key Dominican fresh exports and export firms (Raynolds 1994).

12. Over half of small-scale organic banana growers in Azua have fewer than five years of schooling. Average education in isolated cocoa- and coffee-producing regions is often even lower.

European markets by nationally instituting their organic rules and gaining a place on the European Union's list of "third countries" permitted market entry without further inspections.

Organic production in the Dominican Republic is substantially more expensive than conventional agriculture because of certification costs as well as higher labor expenses and lower yields. While organic prices have generally more than compensated for these costs over the past fifteen years, premiums are declining. Profit margins for all major Dominican organic exports are eroding. Rising competition has driven down organic banana and cocoa prices; organic coffee prices have recently failed to cover even local production costs (FIBL 2002; ICO 2003; Solís 1999). As one longtime exporter lamented, "the solid and dependable profits we once got for Dominican organic products have simply disappeared in the last few years." While profits have eroded for organic banana, cocoa, and coffee exports, this is less the case for the newer mango, lemon, and plantain exports.

Compounding the impacts of declining organic price advantages, quality expectations for major commodities have risen sharply over the past five years. Though coffee from the Dominican Republic is not traditionally of very high quality, organic coffee exports must now meet gourmet standards, as this is the only market offering an organic price premium (Giovannucci and Koekoek 2003). Dominican organic cocoa must similarly meet rigorous quality standards because the cocoa is used in the production of expensive specialty chocolate (Siegal and Alwang 2004). Organic bananas do not enter a differentiated gourmet market, but quality standards have here risen the most dramatically, as a result of the increasing share of organic bananas sold in supermarkets. While quality criteria for organic produce were historically relatively low, supermarkets now require that organic and conventional fruits and vegetables meet essentially the same standards (FAO/ITC/CTA 2001). Most Dominican organic bananas are sold in the United Kingdom, the country with the tightest supermarket regulations. Exporters in the Dominican Republic report that they cannot sell bananas of the quality shipped just a few years ago because buyers require that organic bananas "look like" conventional bananas; in other words, they must be of a uniform specified size, color, shape, and blemish-free appearance.

Major trends in organic food markets are reshaping the institutional relationships of Dominican export networks. Organic exports are encountering mounting competition and falling prices, which makes it hard to cover the costs of certified production. In the Dominican context, certification itself emerges as a major cost and form of bureaucratic control over peasant producers. Initially voluntary, the certification is now obligatory for organic items sold in international markets. Certification rules are

upheld via importer country legislation and increasingly the Dominican government. Once defined according to alternative social and environmental standards, organic quality appears increasingly to be defined by conventional market criteria. All major Dominican organic exports are now regulated by competitive pricing pressures. In bananas, U.K. supermarket regulations require that organic fruit meet agroindustrial-style product standards as well as price standards. The rise of bureaucratic certification, conventional market pricing policies, and industrial-style product standards have clearly dampened the prospects for key Dominican organic commodities and for major export firms. I subsequently explore the impacts of these recent changes on small-scale producers.

SMALL-SCALE PRODUCERS IN THE ORGANIC SECTOR

Dominican organic agriculture has historically been dominated by small-scale growers. Organic export production currently involves about 14,000 producers, the vast majority of whom farm fewer than three hectares of land (Damiani 2002, 17). Small-scale producers such as these are often assumed to have a competitive advantage in organic farming as a result of (1) the ability to tap unpaid family labor in meeting high organic labor demands and (2) the difficulties of large-scale monocropping under organic conditions. While the Dominican agricultural minister recently called organic exports one of the most promising niches for peasant producers (Hoy 2004), this promise needs to be critically evaluated in the face of changing conditions.

Table 6 outlines current production characteristics in key Dominican organic commodity areas. Small-scale production is currently most prevalent in cocoa, where 9,500 households farm organically, each cultivating a few hectares using household and hired labor. Producers are largely agrarian-reform beneficiaries organized into two associations. The biggest, CONACADO, includes 130 groups across nine provinces (CONACADO 2005). CONACADO has successfully eliminated export intermediaries and sells directly in international markets. This association bolsters the economic viability of small-scale producers by providing production and consumption credit. CONACADO mediates foreign certifier demands by maintaining an internal control system and by coordinating organic certification. The association has developed collective economies of scale and has introduced postharvest processing to increase value added and to facilitate access to increasingly competitive markets.¹³ Despite these efforts, gourmet chocolate processing firms are reticent to buy Dominican

13. Most organic (unlike nonorganic) cocoa beans are fermented before export; organic cocoa is also transformed into cocoa butter, powder, liquor, and chocolate before shipping.

Table 6 *Organic Export Production Characteristics*

Product	Number of producers	Production area (hectares)	Major producers
Bananas ^a	1,750	6,000	750 smallholders organized into three associations; the rest medium and large producers
Cocoa ^b	9,500	20,000	9,500 smallholders organized into two associations
Coffee ^c	1,500	1,500	500 smallholders organized into three associations; the rest medium and large producers
Mangoes ^d	25–30	1,250	25–30 medium and large producers

Note:

- a. Figures are from interviews with top organic banana exporters.
 b. Figures provided by major associations.
 c. Figures provided by major associations and reported in Helvetas (2001).
 d. Figures reported in Solis (1999) and Helvetas (2001).

cocoa because of quality concerns (Siegel and Alwang 2004, 66–69). CON-ACADO currently sells only 5 percent of its output in premium organic markets; cocoa that fails to meet these high standards is sold at much lower prices in conventional markets. While thousands of Dominican small producers are growing organic cocoa, they appear quite vulnerable in the face of rising quality restrictions and falling revenues.

Dominican organic export bananas were initially grown almost entirely by small producers, but their importance has declined sharply in the past decade. Small growers produced up to 90 percent of organic bananas in 1997 (Meier 1999); they now produce less than 50 percent. There are 750 small farmers cultivating an average of three hectares of largely agrarian-reform land. These growers rely on hired labor as well as family members to meet the intensive labor demands of organic farming. There are three producer associations that coordinate banana collection, washing, and packing (Knowles 2005). But the shipping and distribution of this highly perishable fruit is done by foreign-owned firms with strong European ties. The two largest export companies purchase from small growers but rely increasingly on their own production and purchases from larger suppliers. The largest organic banana producer farms 500 hectares. Managers of organic banana export firms concur that the rising quality required by European supermarkets is the key factor limiting the participation of Dominican small producers. Buyer demands for perfect and uniform fruit encourage large-scale banana monocropping, which facilitates the control of product appearance. Volume contracts and mounting international competition also are increasing concentration among ex-

porters, with the largest firm now controlling 70 percent of organic banana exports. Mainstream market pressures promulgated by dominant supermarkets are clearly threatening the place of small enterprises in the Dominican organic banana sector.

Small-scale producers are less prevalent in organic coffee and mango production in the Dominican Republic. Organic coffee cultivation has always involved larger growers, and their presence is not due to a process of concentration. Medium- and large-scale enterprises have traditionally taken the lead in export coffee production, and they have maintained their lead in the organic sector (CEDOPEX 1999). The five hundred small Dominican organic coffee producers are organized into associations. Most groups have had difficulty meeting international market demands, but one association (FUNDOCAFE) is successfully selling high-quality organic coffee directly to gourmet roasters (Siegal and Alwang 2004). Organic mangos in the Dominican Republic are grown almost exclusively by medium and large producers. As with bananas, the fragility of this fruit and the difficulties in satisfying buyers' strict quality demands create significant barriers to entry for smaller producers. Thus, while international markets for these less well-established organic fruits appear strong, they are unlikely to benefit large numbers of small Dominican producers.

This overview suggests that the competitive advantage of small producers in Dominican organic exports cannot be assumed and may be declining, even in crops where they have prevailed. Though small farmers are assumed to rely on family labor, small Dominican organic growers also hire labor, minimizing their cost advantages over large producers. And though organic cultivation is often seen as incompatible with large-scale production, this assumption is challenged by organic enterprises that monocrop hundreds of hectares in the Dominican Republic and other parts of Latin America. Current market forces are further eroding any advantages previously held by small organic producers. Supermarket quality regulations are marginalizing once-dominant small organic banana producers and restricting the entry of smallholders in new organic fresh fruits. In more durable commodities like cocoa, quality restrictions imposed by processors are excluding small farmers from profitable organic markets, though not from production.

Political and social forces in the Dominican Republic have softened the impact of market forces on small-scale producers. The vast majority of small organic producers are agrarian-reform beneficiaries who have received preferential access to Dominican government services as well as to foreign assistance (Damiani 2002; Siegal and Alwang 2004). Agrarian-reform producers have been required to form associations, which have proved central in facilitating organic certification, maintaining export quality, and consolidating output. Yet these producer groups face significant challenges in accessing global markets. As the director of

CONACADO stated, "These days the competition for small scale farmer organizations has become very aggressive, so only niche markets allow us to survive" (Global Exchange 2005). Currently all the most successful organic producer groups in the Dominican Republic are strengthened by their engagement in fair trade markets.¹⁴ With sales to fair trade markets, producers receive guaranteed above-market prices, which helps counteract the decline in organic premiums and the recent price volatility of products like cocoa and coffee (Raynolds 2002). Fair trade networks have also helped Dominican associations finance production improvements, including organic certification, and support community programs. Perhaps most significant, fair trade integrates participating producers into networks of international solidarity (Raynolds et al. 2007b). These combined noneconomic forces have worked to offset the tendency for market forces to displace or disempower small Dominican organic producers.

CONCLUSIONS

This analysis of the organization and dynamics of the Dominican organic export sector deepens our understanding of the implications of organic exports for national development, for firms, and for small producers. Because the Dominican Republic is at the forefront of what is increasingly a Latin American boom in organic exports, conclusions from this analysis should be considered within a regional and a national context. The contextualized commodity network approach developed here explains the emergence and persistence of the Dominican Republic as a lead exporter of organic bananas and cocoa and an important exporter of coffee and new items like mangos. Contextualizing the analysis of organic export growth within broader, historically specific local, national, and international forces helps explain the Dominican Republic's surprising leadership in this trade. Analyzing the multifaceted dimensions of organic commodity networks helps explain how quality and certification requirements, as well as price competition, are reorganizing production and how social and political actors are mediating market forces.

This investigation finds that Dominican organic export production represents a particular segment of the broader nontraditional agro-export sector. In the Dominican case, organic exports involve new commodities and varieties of traditional commodities distinguished by their organic certification and labels. Since the late 1980s, Dominican government policies have promoted organic exports, initially unintentionally within the overall push to bolster nontraditional exports, but increasingly through

14. This includes CONACADO in cocoa, FUNDOCAFE in coffee, and Finca 6 and Banelino in bananas. Finca 6 also sells to highly specialized biodynamic markets.

policy support aimed explicitly at the now economically important organic trade. As in other nontraditional export arenas in the Dominican Republic and throughout Latin America, the success of organic exports has been fostered also by multilateral and nongovernmental assistance as well as by numerous private-sector initiatives. The complexity of factors explaining the historical rise and persistence of Dominican organic exports suggests that the future success of these nontraditional exports is by no means assured but will depend on effective public and private investment.

The longitudinal analysis provided here illuminates the impacts of shifting global market trends, most importantly, rising competition and escalating quality demands, on the Dominican organic sector. Rising competition and falling organic price premiums are undermining the profitability of organic exports given relatively high cultivation costs and the expenses of certification itself. Meanwhile, quality expectations have risen dramatically in all major organic commodity areas in recent years. Where organic product quality was initially defined largely in relation to social and ecological features, quality is increasingly defined by industrial and market conventions. Dominican organic bananas must now meet strict appearance-based standards established by major supermarket retailers, while organic cocoa and coffee are held to gourmet standards established by processors and roasters. Buyers in these commodity areas not only are dictating organic product specifications but also are increasingly shaping enterprise participation and production processes. In short, as organic commodities become more mainstream, they are shaped increasingly by mainstream market pressures.

This analysis cautions against an overly optimistic view of the long-term opportunities presented by organic exports for national economics, for firms, and most important, for small-scale producers. While small producers have historically played a critical role in the production of Dominican organic exports, their position has become less secure in the face of recent market trends. My findings suggest that certified organic food exports are becoming more "buyer driven," as the commodity chain literature would suggest (Gereffi 1994; Gereffi, Humphrey, and Sturgeon 2005). Current market trends are increasing the power of buyers and are working to displace or disempower small organic producers. Yet if we look beyond the realm of economic firms, we find that strong producer associations and transnational movement ties have countered these trends with some success in the Dominican Republic. The engagement of Dominican organic producers in parallel fair trade and biodynamic initiatives has been critical in maintaining nonmainstream organic social and ecological principles (Raynolds et al. 2007b). My findings do not contradict recent studies that suggest that small producers are being marginalized in key organic sectors like coffee (Gómez Tovar et al. 2005; Muradian and

Pelupessy 2005; Mutersbaugh 2002), yet they help explain why some researchers have analyzed the same cases and drawn the opposite conclusion (Bray et al. 2002; Reynolds 2002). The marginalization of small-scale organic growers is not inevitable, but their future well-being across Latin America depends on the creation of social networks that support alternative organic values, exchange relationships, and enterprises.

REFERENCES

- Balbi, Maria Julia
 2002 *Argentina Organic Products Report 2002*. Buenos Aires: Foreign Agricultural Service/U.S. Department of Agriculture.
- Barrientos, Stephanie
 1997 "The Hidden Ingredient: Female Labour in Chilean Fruit Exports." *Bulletin of Latin American Research* 16 (1): 71-81.
- Borges da Fonseca, Fabiana
 2002 *Brazil Organic Products Report 2002*. Sao Paulo: Foreign Agricultural Service/U.S. Department of Agriculture.
- Bray, David B., Jose Luis Plaza Sanchez, and Ellen Contreras Murphy
 2002 "Social Dimensions of Organic Coffee Production in Mexico: Lessons for Eco-Labeling Initiatives." *Society and Natural Resources* 15: 429-446.
- Capoc (Cámara Argentina de Productores Orgánicos Certificados)
 2001 "Situación actual de la producción orgánica en la Argentina." <http://www.organic.com.ar>.
- Carletto, Calogero, Alain de Janvry, and Elisabeth Sadoulet
 1999 "Sustainability in the Diffusion of Innovations: Smallholder Nontraditional Agro-Exports in Guatemala." *Economic Development and Cultural Change* 47 (2): 344-369.
- Cashore, Benjamin, Graeme Auld, and Deanna Newsom
 2004 *Governing through Markets: Forest Certification and the Emergence of Non-State Authority*. New Haven, CT: Yale University Press.
- CEDOPEX (Centro Dominicano de Promoción de Exportaciones)
 1999 "La agricultura orgánica en la República Dominicana." *El Exportador* 27.
 2001 *Exportaciones nacionales 2001*. Santo Domingo: CEDOPEX.
 2002 *Exportaciones nacionales 2002*. Santo Domingo: CEDOPEX.
 2006 *Exportaciones nacionales 2003-2006*. www.cedopex.gov.do/estadisticas.
- CONACADO (National Confederation of Dominican Cocoa Cultivators)
 2005 *Cacao orgánico*. Santo Domingo: CONACADO.
- Damiani, Octavio
 2002 *Small Farmers and Organic Agriculture: Lessons Learned from Latin America and the Caribbean*. Rome: International Fund for Agricultural Development.
- Dolan, Catherine, and John Humphrey
 2000 "Governance and Trade in Fresh Vegetables: The Impact of UK Supermarkets on the African Horticulture Industry." *The Journal of Development Studies* 37: 145-176.
- FAO (U.N. Food and Agriculture Organization)
 1999a *Organic Agriculture*. COAG/99/9. Rome: FAO.
 1999b *The Market for "Organic" and "Fair-Trade" Bananas*. CCP/BA/TF 99/7. Rome: FAO.
- FAO/ITC/CTA (U.N. Food and Agriculture Organization, International Trade Centre, and Technical Centre for Agricultural and Rural Cooperation)
 2001 *World Markets for Organic Fruit and Vegetables*. Rome: FAO.
- FIBL (Research Institute of Organic Agriculture)
 2002 *Organic Coffee, Cocoa, and Tea*. Frick, Switzerland: FIBL.
- Fonseca, María Fernanda, and John Wilkinson
 2003 "As oportunidades e os desafios da agricultura organica." Unpublished manuscript, Program on Agriculture and Society (PDA), Rural Federal University, Rio de Janeiro.

- Friedmann, Harriet, and Philip McMichael
 1989 "Agriculture and the State System: The Rise and Decline of National Agricultures." *Sociologia Ruralis* 24 (2): 93-117.
- Garibay, Salvador
 2006 "Organic Cocoa Production." In *The World of Organic Agriculture, 2006*, edited by Helga Willer and Yussefi Minou, 58-60. Bonn: International Federation of Organic Agriculture Movements.
- Gereffi, Gary
 1994 "The Organization of Buyer-Driven Global Commodity Chains." In *Commodity Chains and Global Capitalism*, edited by G. Gereffi and M. Korzeniewicz. 95-122. Westport, CT: Praeger.
- Gereffi, Gary, Ronie Garcia-Johnson, and Erika Sasser
 2001 "The NGO-Industrial Complex." *Foreign Policy* (July/Aug.): 56-65.
- Gereffi, Gary, John Humphrey, and Timothy Sturgeon.
 2005 "The Governance of Global Value Chains." *Review of International Political Economy* 12 (1): 78-104.
- Giovannucci, Daniele, and Freek Jan Koekoek
 2003 *The State of Sustainable Coffee: A Study of Twelve Major Markets*. Philadelphia: International Institute for Sustainable Development.
- Global Exchange
 2004 *Dominican Republic: La Siembra Co-op*. www.globalexchange.org/campaigns/fairtrade
- Gómez Tovar, Laura, Lauren Martin Martin, Manuel Ángel Gómez Cruz, and Tad Mutersbaugh
 2005 "Certified Organic Agriculture in Mexico." *Journal of Rural Studies* 21: 461-474.
- Guthman, Julie
 2004 *Agrarian Dreams: The Paradox of Organic Farming in California*. Berkeley: University of California Press.
- Hamiltoń, Sarah, and Edward Fischer
 2003 "Non-Traditional Agricultural Exports in Highland Guatemala." *Latin American Research Review* 38 (3): 82-110.
- Helvetas
 2001 "Dominican Republic." In *World Market for Organic Fruit and Vegetables*, edited by FAO/ITC/CTA. 272-285. Rome: FAO/ITC/CTA.
- Hoy
 2004 "Agricultura orgánica." *Hoy (Digital)*. <http://www.hoy.com.do>.
 2005 "País exportará US\$20 millones en productos orgánicos en 2005." *Hoy (Digital)*. <http://www.hoy.com.do>.
- ICO (International Coffee Organization)
 2003 *Organic Coffee Export Statistics: Coffee Year 2002/03*. London: ICO.
- International Fund for Agricultural Development
 2003 *The Adoption of Organic Agriculture among Small Farmers in Latin America and the Caribbean*. Thematic Evaluation. Rome: International Fund for Agricultural Development.
- JACC
 1990 "Crece agricultura orgánica." *Agroempresa* (July/August): 30.
- JAD
 1998 "Fomentan desarrollo agricultura orgánica." *Agroempresa* (June/July): 23.
 1999 "Sugieron mayor apoyo y fomento agricultura orgánica." *Agroempresa* (December): 57-58.
 2002 "Demanda insatisfecha productos orgánicos." *Pymes Dominicanas.com* http://www.pymesdominicanas.com/articulos/demanda_dr.htm.
- Knowles, Mike
 2005 "Sunshine Returns to Dominican Organic Banana Sector." *EUROFRUIT* (371): 51-52.
- Lernoud, Pipo
 2005 "Latin America." In *The World of Organic Agriculture: Statistics and Emerging Trends*, edited by Helga Willer, and Minou Yussefi. 123-148. Bonn: IFOAM.

- Meier, Christoph
1999 "El Mercado en Desarrollo del Banana Orgánico." *El Exportador Dominicano* 27: 18-19.
- Muradian, Roldan, and Wim Pelupessy
2005 "Governing the Coffee Chain: The Role of Voluntary Regulatory Systems." *World Development* 33: 2029-2044.
- Murdoch, Jonathan, Terry Marsden, and Jo Banks
2000 "Quality, Nature, and Embeddedness: Some Theoretical Considerations in the Context of the Food Sector." *Economic Geography* 76 (2): 107-125.
- Mutersbaugh, Tad
2002 "Ethical Trade and Certified Organic Coffee." *Transnational Law and Contemporary Problems* 12 (1): 89-108.
- Olivo, Blas
1989 "Crece agricultura orgánica." *Agroempresa* (July/August): 40-41.
- Ponte, Stefano
2002 "The 'Latte Revolution'? Regulation, Markets and Consumption in the Global Coffee Chain." *World Development* 30: 1099-1122.
- ProChile
2001 Development of Chilean Organic Exports. <http://www.chileorganic.com>.
- Raynolds, Laura T.
1994 "Institutionalizing Flexibility: A Comparative Analysis of Fordist and Post-Fordist Models of Third World Agro-Export Production." In *Commodity Chains and Global Capitalism*, edited by Gary Gereffi and Miguel Korzeniewicz, 143-161. Westport, CT: Praeger.
2001 "New Plantations, New Workers: Gender and Production Politics in the Dominican Republic." *Gender & Society* 15 (1): 7-28.
2002 "Consumer/Producer Links in Fair Trade Coffee Networks." *Sociologia Ruralis* 42: 404-424.
2004 "The Globalization of Organic Agro-Food Networks." *World Development* 32: 725-743.
- Raynolds, Laura T., Douglas Murray, and Andrew Heller
2007a "Regulating Sustainability in the Coffee Sector: A Comparative Analysis of Third Party Environmental and Social Certification Initiatives." *Agriculture and Human Values* 24 (2): 147-163.
- Raynolds, Laura T., Douglas Murray, and John Wilkinson (eds.)
2007b *Fair Trade: The Challenges of Transforming Globalization*. London: Routledge.
- Siegel, Paul, and Jeff Alwang
2004 *Export Commodity Production and Broad-based Rural Development: Coffee and Cocoa in the Dominican Republic*. Washington, DC: World Bank.
- Solís, María Esperanza
1999 "Exportacion de productos orgánicos." *El Exportador Dominicano* 27: 9-11.
- Talbot, John M.
2002 "Tropical Commodity Chains, Forward Integration Strategies and International Inequality." *Review of International Political Economy* 9: 701-734.
- Thévenot, Laurent
1995 "Des marchés aux normes." In *Régulation et conventions dans l'agriculture et l'agro-alimentaire*, edited by G. Allaire and R. Boyer, 33-51. Paris: French National Institute for Agricultural Research.
- Wilkinson, John
2002 "Genetically Modified Organisms, Organics, and the Contested Construction of Demand in the Agrofood System." *International Journal of Sociology of Agriculture and Food* 10 (2): 3-11.
- Willer, Helga and Minou Youssefi
2006 *The World of Organic Agriculture Statistics and Emerging Trends*. Bonn: IFOAM.

Copyright of Latin American Research Review is the property of Latin American Research Review and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.