



On the Moral Equivalence of Global Commodities: Placing the Production and Consumption of Organic Bananas

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Abstract. Rapid change and growth in certified organic food sectors has led to the development of export-orientated certified organic food production in developing economies. This lengthening of the supply chain requires the development and implementation of meaningful standards to make the production process in developing countries legible to consumers in developed economies. As an example of the globalization of organic foods and analysis of its corresponding standards, this article discusses the political, cultural and economic context for the supply of and demand for organic bananas in the Dominican Republic and the United Kingdom, respectively. We focus on the role of certification schemes that have emerged in response to this global expansion, and suggest that, contrary to consumer expectations, there are political, economic and environmental outcomes that are inconsistent with organic standards.

Introduction

Organic foods are receiving much attention of late, both from consumers demanding fresh, quality and ostensibly safer foods (Soil Association, 2011), and from academics attempting to understand the intersections of economic and cultural value embedded in a rapidly growing consumer market and expanding social movement (Morgan and Murdoch, 2000; Zanolini and Naspetti, 2002; Milestad and Hadatsch, 2003; Baker et al., 2004; Dabbert et al., 2004; Guthman, 2004a; Rosin and Campbell, 2009; Goldberger, 2011). The involvement of organic bagged spinach in the 2006 E. coli O157:H7 outbreak in the United States revealed the embeddedness of organic agriculture in the conventional food system and the increasingly uneasy tensions and blurry lines between organic and conventional agricultural practices and products. Historically, consumers of organic foods have chosen organic produce because of a personal conviction about what is not in the food (namely pesticides and fossil fuels) but, as the organic agriculture sector grows increasingly larger and organic foods are more widely distributed and more processed and packaged, the alternative basis of

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consumption is increasingly challenged (and in some cases revealed) by the realities of production practices, suggesting a logical fallacy of moral equivalence.

This article responds to questions posed by Freidberg (2010) regarding the demand for metrics and the rigor and purpose of private standards in food governance, including the question of 'who can eat what in different places' (p. 1872). In particular, this article focuses on the role of standards in 'audit culture' (Campbell, 2005) in making certain aspects of the organic supply chain legible, while obscuring others. The organic sector has been growing at a faster rate than the food market as a whole, and production is rapidly expanding throughout the world from its base in developed economies as consumers demand exotic and seasonal fruits and vegetables year round (Soil Association, 2011). Research on the expansion of this sector can hardly keep up with its growth, much less with the social implications of a continuously and rapidly evolving market. Using organic bananas as a case from which to draw conclusions, we investigate the consequences for organic production and consumption with the expansion of the organic sector into developing countries, as driven by the needs and requirements of consumers in developed economies.

We are interested in: how organic bananas are viewed by these consumers, particularly in the United Kingdom (UK); the role of private standards in an extended supply chain; and the realities of production in developing countries, with a particular focus on the Dominican Republic. This article is divided into three parts. In the first part, we will outline the structures of consumption, certification and production of organic foods, with particular emphasis on the development of certification schemes. In the second part, we will discuss production and consumption for organic bananas, using the Dominican Republic and the UK as case examples. In the third part, we will discuss how, contrary to UK consumer expectations, there are political, economic and environmental outcomes of organic banana production that are inconsistent with organic standards. These outcomes, ironically, are driven by the certification process, which allows for the extension of the supply chain and renders certain production practices illegible to consumers.

The Organic Food Production System

Organic foods are unique in several ways. First, organic fresh fruits and vegetables gain additional value through controlled and monitored production processes, which are traceable and accountable through certification schemes. Organic food eaters consume more than just the commodity: they pay a premium for what *is not* added to the product (pesticides, growth hormones, genetic modification) or, in the case of social issues, the *perception* of contributing to a more just food system (especially regarding rural development and working conditions). Second, organic food social movements have emphasized the establishment of networks of trust through short supply chains, where producers have face-to-face interactions with consumers and can assure the quality, security and safety of food products to the consumer, either through certification or personal relationships (Renard, 2003; Renting et al., 2003; Freidberg, 2004). Organic foods have ultimately gained additional value through embeddedness, by promoting an ethos of 'localness', which encourages consumers to invest in particular cultural values (sustainability, local, alternative).

The internationalization of organic agriculture presents challenges in providing many of the qualities consumers seek to find in organic foods, including the safety and quality of the food itself, as well as contributing to the preservation of rural and

agricultural livelihoods in both developed and developing market economies. The consumption of organic foods imported from developing countries in preference to conventional foods may actually present a problem of moral equivalence when considered from the standpoint of social, environmental or political realities in the places of production. Working backwards from consumption in the UK to production in the Third World, and the Dominican Republic in particular, we seek to address this question through the analysis of one particular commodity: the organic banana. The following discussion sketches the organic food supply network and how organic values are infused and codified in organic foods via standards.

Consumption

The growth in demand for organically produced food continues to outstrip supply worldwide (FAO, 2001; Barrett et al., 2002; Soil Association, 2003; Dabbert et al., 2004; Willer and Kilcher, 2011). Growth rates for organic food consumption have ranged between 10–40%, and up to 85% in Europe (Dabbert et al., 2004). Organic Monitor reports that worldwide organic food and drink sales have trebled between 2000 and 2010, rising from US\$18 billion to US\$59 billion (Willer and Kilcher, 2012). The biggest increase in organic demand occurred between 2004 and 2005, as a nexus of increased consumer and producer awareness, production subsidies or other assistance, production scale economies and greater adoption within the retail sector permitted demand and supply to grow simultaneously, albeit not necessarily conjointly (Rigby et al., 2001; Soil Association, 2006, 2010). Nonetheless, the percentage of total food consumption comprised by organic foods remains rather low: the United Nations Food and Agriculture Organization (FAO) estimated a range of 1–3% of food expenditures for most developed economies (FAO, 2001), with the United States falling in the middle of this range in 2010.¹ The majority of organic food consumption currently takes place in developed economies, with production increasingly occurring worldwide, although ongoing global economic recession has slowed sales somewhat (Willer and Kilcher, 2011).

It is well documented that an increase in organic food consumption follows food scares and particularly so in the UK where consumers lost trust in the safety and quality of the food supply following scares over the last decade (Renard, 2003; Freidberg, 2004; Guthman, 2004a). Organic foods are perceived to be safer because of the traceability of the food product and the perception that organic farming uses less toxic or more ‘natural’ chemicals in production. Interlinked with the organic food movement are local foods movements, which emphasize establishing relationships of ‘trust’ between consumers and producers with short supply chains (Halwell, 2002; Winter, 2003). The movement is embedded philosophically in a desire to promote rural development in developed economies, but equally important is retaining a market niche that is increasingly dominated by supermarkets and retail organic/natural food chains. Sixty per cent of British consumers of organic foods are more likely to state a preference for UK origin, and 70% of those preferring local foods indicate a willingness to pay more for it (Soil Association, 2004).

Codifying Supply

The ‘organic movement’ is considered generally to begin with Dr. Rudolf Steiner’s 1924 Agricultural Course and writings on biodynamic agriculture, based in Dornach,

Switzerland. Graduates of the Agricultural Course established biodynamic farming practices throughout interwar Switzerland, Austria and Germany, and organic-style farming is commonly known in these countries as ecological or biological farming (Dabbert et al., 2004). The codification of organic/biodynamic farming predates the introduction of nitrogen fertilizers, growth hormones and antibiotics and the intensification of scale that occurred from the 1950s onward (Dabbert et al., 2004). However, growth in organic food production and sales was slow for most of the twentieth century, with substantial growth only occurring from the late 1980s. In the very early years, most consumers were also producers, and the development and proliferation of standards and certification schemes was coincident with the expansion of supply and demand (Campbell and Liepins, 2001). The Soil Association, founded in 1946, is now the UK's leading organic certifier and lobbying organization (Reed, 2001) and was instrumental in establishing a normative discourse of what ought to be, rather than what can be positively proven. This included the establishment of standards and a subsequent role as a certifier and of managing/coordinating the supply chain. It increasingly assumed quasi-governmental roles of (self-)regulation and information provision (through the Organic Conversion Information Service), and increasingly adopts these roles in the developing nations of Africa and elsewhere.

The organic food sector has benefited from the establishment of organic as a multifaceted and multilayered signifier: of reassurance of the process of production; of the 'fairness' of the product to the environment and society; and of the distinctiveness of the sector as a whole, as a brand. Indeed, Guthman (1998) suggests that the expansion of the organic market is simply one more way to differentiate a product (see also Adams and Salois, 2010). This differentiation has been achieved through the system of certification, which enables producers and retailers to attach a branded sign of acceptance to organic products through the establishment of standards and accreditation of certifiers. Guthman (1998) also observes that this is a double-edged sword for producers and consumers, as regulation makes 'nature safe and available' for consumers, but it also makes 'organic agriculture safe for capitalism' (p. 150; see also Mutersbaugh, 2004). Consumers seeking a more social form of food production increasingly have to look elsewhere, while consumers seeking an ostensibly safer or more legible product need only look for a certification logo (Figure 1).

The certification system attempts to provide reassurance to the end consumer of an authenticated and seamless production and retailing system. Meuwissen et al. (2003, p. 53) define certification as 'the (voluntary) assessment and approval by an (accredited) party on an (accredited) standard'. For this to be reassuring and seamless to the consumer a number of factors must come into play. First, the 'standard' must be meaningful to both consumers and producers, as both desirable and attainable; second, the accrediting 'party' must be credible in ensuring said standards are



Figure 1. Organic certification logos.

adhered to. Jahn et al. (2005, p. 57) term the resulting certified mark as a 'quality signal', which in turn enables higher margins (Guthman, 2004c). This is reflected in the inclusion of 'quality' claims in many organic certification labels (Figure 1). Establishing and maintaining a meaningful standard, and the credibility of the certifier, are essentially exercises in brand creation. Certification symbols, or organic brands, have evolved and become established in complex ways, which bear a brief review.

The UK's Soil Association first published a set of organic production guidelines in 1967 to assist the conversion to organic production; by 1973 this had been codified into a set of certifiable standards, enforced and inspected by the Soil Association Organic Marketing Company (now known as SA Certification Ltd, SACL), a wholly-owned subsidiary of the charity. In 1983 the Soil Association helped create the British Organic Standards Committee, in concert with other newly established (mostly) national certification organizations such as Organic Farmers and Growers, Scottish Organic Producers Association, and the Bio-Dynamic Agricultural Association (using the Demeter logo). This was superseded in 1987 by the UK Register of Organic Food Standards (UKROFS), the governing body that helped oversee the substantial growth in UK organic food production and consumption through the 1990s, and which became a minor-league certifier in its own right. In 2003 UKROFS was replaced by the Advisory Committee on Organic Standards (ACOS) of the Department for Environment, Food and Rural Affairs (DEFRA). The increasing scale of regulatory enforcement partly reflects the increasing scale of production and trade, but also the introduction of first UK (1983) and then EU (1991) regulations governing organic food production, labelling and sale.

Along with the increasing numbers of suppliers and regulations has come proliferation in certification and labelling schemes. In 2002 there were nine UK certification bodies recognized by UKROFS; in its final year the body approved a further five. SACL, responsible for the most commonly found UK5 identification code, attracts the largest number of suppliers, and supplies an estimated 80% of all certified organic products sold in the UK (Soil Association, 2012). Of these UK certifiers, only SACL is accredited with IFOAM (the International Federation of Organic Agriculture Movements), and therefore has international credibility. SACL also enjoys preferential treatment from the UK supermarket chain Sainsbury's, which will only stock products carrying the Soil Association UK5 mark.² Consumers must recognize a certifier's brand, such as the Soil Association's UK5 code or logo, and believe that the organization is trustworthy in vetting and monitoring production and retailing processes, with this belief established perhaps through public relations campaigns, prior experience, or word of mouth. What the consumer does not see in the 'certified organic' code or logo is the complex web of inter-organizational relations that are required for the organic food production system to appear so seamless (Figure 2).

The 'sharp end' of the certification system involves an agent from the certifying body (such as Soil Association Certification Ltd) inspecting a farm and observing its production processes and paperwork. The certifying body in turn must submit its certification inspection systems for approval by state bodies (such as the UK's, ACOS) and, desirably, international bodies as well (such as IFOAM, 2005). These 'meta-certifiers' allow the standards of one certifier to be equated to those of others (those accredited by IFOAM), in the same country or internationally. What this is supposed to mean is that a strawberry from a farm certified by SACL should be as 'organic' as a strawberry from a farm certified by Bioland eV of Germany or Organic Crop Improvement Association International (OCIA) of the United States.

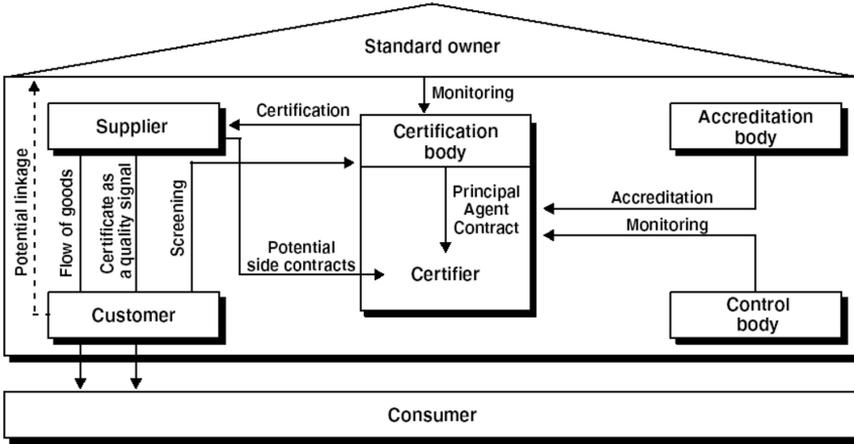


Figure 2. Certification process.

Source: Jahn et al., 2005, p. 60.

All three of these certifying bodies are accredited to IFOAM, and thus carry the moral (although not legal) weight of equivalence. Each certifier operates in different ways, however, with variations in the frequency of inspections, checklists used and allowable levels of 'must-haves' (separation distances from non-organic production, crop rotation frequencies, livestock densities) and 'must avoids' (pest control mechanisms, antibiotics). Consumers may not be able to observe or taste the difference in these legalistic minutia, but to a farmer the differences can be quite important administratively, operationally and financially. In practice the standards that are comparable internationally are the absolute minima that can be agreed to comprise 'organic': no artificial chemical pesticides, nitrate fertilizers or growth-enhancing pharmaceuticals, and no genetic modification (for discussion of the IFOAM Basic Standards, see Reynolds, 2004, p. 731).

Globalizing Production

Dabbert et al. (2004) argue that while organic food production and consumption may have been rooted initially in a social movement, policy directives and subsidies in the EU have played a crucial role in expanding production and consumption. Guthman (2004a) argues that organic food production is driven by the value-seeking behaviours of both small-scale and large-scale producers. She suggests that high land values, and the resulting imperative to extract greater returns, pushes producers into high-value, niche markets. The influence of market forces on organic production has the effect of reducing it to a technical practice (Renard, 2003; Guthman, 2004a; Harris, 2005) that lends itself most simply to the production of commodities, not the production of community or healthier food or more productive soils. Critics of the technocratic and industrializing directions of organic agriculture call this process 'conventionalization', which has been subject to much attention and debate in recent years (Campbell and Liepins, 2001; Guthman, 2004b; Goldberger, 2011).

There are a number of reasons given to justify the expansion of organic production into developing economies. The most frequently cited is that the diversification

of farm output toward high-value exports can reduce the vulnerability and increase the profitability of small-scale farms and resource-poor farmers (FAO, 2001). Similarly, organic production is promoted as a development scheme in developing countries because diversifying production to capture the high value of organic markets is seen as a way to expand revenue and help alleviate poverty (FAO, 2003a). It is also hoped, and in some cases demonstrated, that organic and fair trade production in developing countries would increase food security, reduce livelihood vulnerability, and improve the sustainability and quality of life for producers (Hillocks, 2002; Bacon, 2005). Many farmers in developing countries are already organic by default, with low levels of pesticide application as subsidies on imports have declined under deregulation and trade liberalization policies (Hillocks, 2002).

The extension of the organic food network necessarily involves enrolling importers, wholesalers and retailers, which erodes the short linkages based on trust that have complemented the certification process. While consumers believe they are consuming a safer and more just food, it is very difficult, if not impossible, for them to find out for themselves in globalized production–consumption networks. The extension of the supply chain through certification introduces new variables into local production systems and can have positive or negative effects on the agrarian communities in question (Mutersbaugh, 2002; Getz, 2008). The consumer is left to place trust in the label and the certification process, rather than the farmer. In addition to concerns about environmental or social conditions on the farm, there are concerns that the increasingly globalized supply chains for organic food mean an increase in ‘food miles’ (Halwell, 2002; Lawrence, 2004), potentially limiting the appeal of organic food to those interested in them for social and environmental sustainability or nutritional content reasons. Indeed, it is feared that through certification ‘consumers are buying a clear conscience and are forgetting their ideals’ (Renard, 2003, p. 92).

Organic foods are new to the global food economy, and as such data on multinational organic production and consumption are scarce and unreliable (FAO, 2001), and theorization of the implications scarcer still. The cultural politics and practices of the organic food movement are increasingly criticized in the developed world (Grossman, 1998; Striffler and Moberg, 2003; Campbell, 2005; Shreck, 2005; Campbell and Rosin, 2011), but little empirical research has been done on the implications of the expansion of organic agriculture worldwide. Using a supply chain analysis of one organic commodity, the banana, we hope to provide insight into the way standards promote the globalization of organic foods, and illustrate the implications this has for producers, consumers and the certification process.

The Organic Banana in the Global Economy

To understand the dynamic configurations and structures within the global organic banana agro-system, we engage in two levels of analysis with two different kinds of data. First, we use data on organic (and fair trade)³ banana production, consumption and trade, to examine organic banana commodity flows. This allows us to see the general patterns of trade and relationships that are established for organic bananas, and to explain why this particular trade flow exists. We also present some primary empirical data from our field research in the UK and Dominican Republic to further explain the supply chain and its implications. From these data we draw some conclusions about the influence of standards on production outcomes.

In spite of a rather marginal share of the world market, annual growth rates for organic banana demand are very high and estimated between 65% and 80% in 2000 (FAO, 2003a). The global market has increased steadily since 1998, although there has been a flattening in the growth rate since the global financial crisis hit in 2007. The Dominican Republic, Ecuador and Peru are among the largest producers (Table 1); however, this pattern is likely to change further once other major banana producers bring organic plantations to scale.

Place of Consumption: UK

According to the FAO, the UK is the second-largest market for organic products in the EU and the largest for organic bananas (Liu, 2008). Global sales of organic foods was estimated at just under US\$55 billion in 2009, growing 5% from 2008, the first year growth has dropped below 10% year-on-year (Willer and Kilcher, 2011), and up from an estimated US\$986 million for organic products in general and US\$300 million for organic fruits and vegetables in 2000 (FAO, 2001). However, in spite of very high rates of growth in demand far exceeding that of the general food sector, the total share of food sales has not yet much exceeded 1% in many national markets, though it accounts for just under 3% of the total food market in the UK and just over 3% in Germany (Liu, 2008; Soil Association, 2010). The UK also has just over 4% of productive land dedicated or in conversion to organic production, and well-developed domestic markets comprising multiple retailers, specialist food stores, farmers' markets and home delivery organizations. The demand for imported produce is driven largely by a high latitude growing season, which limits year-round availability of locally produced temperate organic foods. Furthermore, despite the increase in land and food production dedicated to organics, the 'thinness' of the market, with relatively few suppliers and consumers, means supply and demand are difficult to balance, and many of the suppliers tend to be small scale. Imports can be used as a short-run supply filler, and may become permanent if the quality and quantity are reliable enough, and the price cheap enough. There is also an expanding market for tropical and exotic fruits and vegetables, as well as for fruit juices and drinks (Soil Association, 2003). Having no domestic production, bananas are exclusively imported.

The United Kingdom sources its bananas from up to 39 separate countries, although the 10 largest sources provided 92% of the total imported value and 93% of the quantity in 2009 (FAO, 2011). Of these, the Dominican Republic provided 14% of the total quantity of bananas, and 16% of the value, making it the highest per-unit cost supplier to the UK in 2009. Saint Lucia, one of the Windward Islands, a member of the Commonwealth, and a recipient of past favoured-nation status for fruit trade via its relationship with importer Geest and as part of the 'ACP' (Africa, Caribbean and Pacific) group of formerly colonial nations, has traditionally been amongst the top sources of bananas for the UK. Its ranking has dropped sharply since the reduction in UK government preferences for the Windward Islands, Jamaica, Belize and Suriname from 1993, and since the scheduled replacement of quotas by tariffs, as an outcome of the 'banana saga' between the European Union, the United States and Latin American countries (WTO, 2009). The Dominican Republic features even more prominently in the organic banana trade. In 2001 the Dominican Republic exported 25760 metric tonnes of organic bananas to the UK, accounting for 38% of the organic banana volume shipped from the Dominican Republic that year, and at US\$8.5 mil-

Table 1. Total organic banana exports, 2002 and 2007 (metric tonnes).

Exported by	2002		2007		2002		% of 2007 Exports	Europe sources from (2007 %)	Europe sources from (2002 %)
	All exports	All exports	Europe	North America	North America	Other			
Ecuador	24000	143420	92176	47280	3,964	44.2	48.8	12.1	
Dominican Republic	63650	66777	62770*	3,200*	807*	20.6	33.2	71.3	
Peru	18900	65000	31850	26650	6,500	20.0	16.8	9.6	
Colombia	9,700	30000	1,500*	22500*	6,000*	9.2	0.8	4.7	
Other	19990	19200*	768*	14400*	4,032*	5.9	0.4	2.3	
Total imports	136240	324397*	189064*	114030*	21303*				
% All imports			58.3	35.2	6.6				

Note: * estimated from summary data.

Source: derived from FAO, 2003c; Liu, 2008, pp. 19–26, 30.

Table 2. Banana exports from Dominican Republic, 2010.

Rank	Exported to	Total quantity (mt)	Organic quantity (mt)	Organic value (US\$000)	Average price (\$/kg)	% Organic quantity	% Organic value
1	United Kingdom	172920	55890	24290	0.43	46.4	41.8
2	Belgium	61120	45350	22510	0.50	37.7	38.7
3	Netherlands	18930	6,900	4,400	0.64	5.7	7.6
4	Germany	n/s	5,740	3,010	0.52	4.8	5.2
5	Switzerland	n/s	3,940	2,470	0.63	3.3	4.2
6	Haiti	12660	n/s	n/s			
Total		286350	120330	58140			

Notes: Organic includes biodynamic production. Value is calculated FOB (free-on-board, i.e. excludes insurance/transport costs). Belgium acts as a port of entry for the EU and beyond. There are data quality issues in comparing datasets derived from quite different sources, particularly conventional, organic and fairtrade.

Source: Estadística Dirección General de Aduanas y Centro de Exportación e Inversión de la República Dominicana, 2010.

lion, 42% of the value (CEDOPEX, 2002). This has subsequently more than doubled to 55 890 metric tonnes (46%) and US\$24 million (42%) by 2010 (Table 2).

Distribution channels for organic produce include supermarkets (especially so in the UK and US), organic and health food retailers (such as Whole Foods Market) and independent buyer-owned cooperatives, on-farm retailing and Internet sales outlets. Outlets that emphasize local sourcing, such as producer-only farmers' markets, generally do not include organic bananas due to the fact that bananas must be imported. Supermarkets are becoming increasingly important for fuelling growth in organic markets, especially so for imported and tropical produce, as larger retailers try to add value through diversification of offerings and broadening the market (Willer and Yussefi, 2004). Multiple-store retailers accounted for 72% of the UK organic food market in 2010 (Soil Association, 2011).

In 2002, 22% of British consumers cited food safety as their primary purchasing trigger for organics (Soil Association, 2003). 'Taste' and 'quality' are further motivations for consumers to choose organics over conventional products (Soil Association, 2003; Winter, 2003). More recent research by OnePoll suggests that the purported 'natural' and 'unprocessed' nature of organic food is the top reason for its purchase, followed by the restricted use of pesticides in production, and better taste (Soil Association, 2010). Quality organic produce is by definition a fresher product, because preservatives cannot be used to prolong shelf life. This is a primary motivation for upscale restaurateurs capturing the 'yuppie chow' market (Guthman, 2003). Quality is supplied to the consumer through what is ostensibly not in the product (pesticides, preservatives) and assured through certification, although this only applies to the production process, rather than the end product. To determine the extent to which consumers recognized food certification labels, and the degree to which they trusted those labels to represent a variety of food-related constructs, intercept interviews were conducted with 85 consumers in supermarkets and city centres in seven locations in the south and south-east of the UK in 2007–2009. Consumers were asked about their knowledge and experience of organic foods, and about food certification labels – both unprompted (top of mind) and prompted through the showing of label pictures.

Consumers had good awareness of the Fairtrade logo, and rated it very highly for being associated with practices that were 'worker friendly' (Table 3); unsurprisingly, this certification scheme was rated poorly for fostering 'local' produce, given its emphasis on assisting the development through trade of less developed areas. Organic certification schemes run by the Soil Association and Organic Farmers and Growers (OF&G) were recognized by just under a quarter of interviewed respondents, with OF&G rated more positively on every dimension than its larger competitor, with four of these being strongly statistically significantly above the ratings for all labels combined ('local', 'health conscious', 'tasty' and 'environmentally friendly', in order of significance). The Soil Association was rated as significantly weaker in being 'worker friendly', shared with the biodynamic label Demeter, and the LEAF label. The same respondents were asked to rate a range of criteria that might influence their decision to buy or not buy organic food, or to buy more or less of it (Table 4). Results show that avoiding additives, pesticides and colouring were the main drawbacks of organic foods, followed by perceived health improvement, taste, quality and being free of genetic modification. Seasonality and local sourcing benefits were still supported but at a much lower level (Table 4). Respondents had some concerns

Table 3. UK consumer certification label perceptions.

Construct							All
% Recognition	21	1	22	5	8	39	
Environmentally friendly	5.7**	4.0	5.4	5.0	4.8	4.7	5.1
Worker friendly	4.9	3.5***	4.1***	3.8***	4.3	6.0**	4.8
Health conscious	5.8**	3.9	5.1	4.1	5.1	4.8	5.1
High quality	5.5*	4.1	5.4	3.9	5.1	5.0	5.0
Inexpensive	3.5	3.0	3.0	2.8	3.3	3.7	3.4
Local	5.2**	2.6	3.9	2.8	3.3	2.5***	3.5
Tasty	5.6**	3.8	5.0	3.8	5.1	4.9	5.0
Attractive	4.8	3.7	4.4	3.5	4.4	4.8	4.5
% Sample evaluating	4.8	12	41	16	21	62	

Notes: Scale 1 = very low level of trust... 7 = very high level of trust; * significantly above 'all' ($\alpha < 0.05$), ** significantly above 'all' ($\alpha < 0.01$), *** significantly below 'all' ($\alpha < 0.01$).

Table 4. UK consumer perceptions: benefits and barriers to organic food consumption.

Benefits	Mean	Barriers	Mean
Avoiding additives	6.4		
Avoiding pesticides	6.4		
Avoiding colouring	6.4		
Better for own health	6.1		
Taste	6.1		
Avaoiding genetic modification	6.1		
Quality	6.0		
Better animal conditions	6.0		
Better for (farm) environment	5.8	Higher prices	5.7
Better prices/ wages for farmers/workers	5.3	Difficult to get information about	4.8
Locally grown	5.3	Poorly promoted	4.4
Seasonality	5.1	Don't last as long	4.2
		Poor range	3.9
		Difficult to find in shops	3.8
		Seasonality	3.7
		Don't look as attractive	3.5

over prices of organic foods, but were not worried about the 'look' or shelf life of their food.

Place of Codification: The Supranational

As an emergent form of global food governance, third-party certification, such as organic, is part of a growing 'audit culture' in the food system (Campbell et al., 2012). The lengthening of the organic food supply chain from its local context necessitated the development of international standards that are evaluated and certified via supranational regulatory frameworks. While spearheaded by organic certifiers, claims to sustainability are now increasingly deployed by supermarkets (i.e. Tesco) and supranational alliances (i.e. GLOBALG.A.P.) to capture high-end markets or to

appeal to health/safety/ethics conscious consumers (Freidberg, 2010; Campbell et al., 2012). These standards often reduce organic production from complicated and place-specific processes to a series of must-haves and not alloweds, allegedly to facilitate transparency and legibility within the food system (Mutersbaugh, 2004; Getz and Shreck, 2006). Campbell (2005) and Le Heron (2003) suggest that the rise of 'audits' also facilitates the neo-liberalization of the food system and promotes a neo-colonial food order based on the needs and wants of consumers in the Global North.

Organic food production and trade requires the oversight of a certification scheme, either based in the country of origin or in the destination market. The largest certifier for the UK is SACL, a subsidiary of the Soil Association, and it is the preferred certifier for Sainsbury's supermarkets (which, through its 'Sainsbury's Organic' brand, is heavily promoting organic food sales). SACL does not have global representation, however, and through multilateral agreements relies on other certifiers such as Germany's BCS Öko-Garantie or the USA's OCIA to run inspections in places such as the Dominican Republic. This intermediation is not transparent to the consumer, and introduces questions of equivalence in the organic standards themselves. For example, Germany's Bioland, while accredited to IFOAM, is not itself a registered inspection body under European Union regulations, and subcontracts other certifiers. BCS Öko-Garantie, a key German competitor, is not accredited to IFOAM but operates in 22 countries including the Dominican Republic, and also certifies for American certifiers such as QAI (using National Organic Programme (NOP) standards), that have different standards from SACL.

SACL, while using EU standards as a baseline, has higher standards than some of the EU certifying bodies with respect to animal welfare, genetically modified organisms and the use of certain pesticides (Soil Association, 2011). While the standards may be roughly equivalent in terms of what is/not allowed, examinations of the fine print reveal how standards can be interpreted and enforced very differently depending on who is applying and evaluating them. For example, in the organic standards programme in the United States, also known as the National Organic Program (NOP) certain synthetic pesticides (such as copper sulphate) may be used in certain situations to control the spread of disease in plant crops. There are no requirements listed in the regulation for documenting how much is used, when, where or how often. The only stipulation is that the use be 'documented in the organic system plan' (AMS, 2012, Reg. 205, 206: d2e). SACL standards permit only copper products as synthetic pesticides, which are severely restricted in the amount that can be used (6 kg/ha/year), and require permission for each use, with the submission of a detailed plan of why it needs to be used and under what circumstances (Soil Association, 2012, Std. 4.11.11). The EU has similar standards to the UK for amount of and authorization of use of copper products, but allow for some variations in the amount of application if the total application works out to 6 kg/ha/year. Thus, it is up to individual farmers to accurately document their practices, and up to inspectors to allow or disallow certain practices that, in the case of copper products, may be permanently damaging to ecosystems.

The attempts to simplify certification schemes, such as combining the state-based US certifications into the National Organic Program, has not necessarily guaranteed equivalence of the standards between nation states, nor reduced the complexity of the intergovernmental relationships that regulate international trade. In an effort to streamline the trade of organic commodities between nation states, some countries have entered into a variety of 'equivalence arrangements' with other nations, such

as those between the United States and the EU (AMS, 2012). Equivalence means that if products are certified in the US as organic, they may be sold in the EU as organic, and vice versa. This effort aims to counter the problems inherent to the varying standards in different certifying bodies, which ultimately make organic products a non-fungible commodity. The equivalence agreements aim to make standards legible across space (Mutersbaugh, 2004), as well as prevent the need for one nation’s certifying bodies to operate within the boundaries of another national state. These agreements, however, redefine radically the regulation of organic production by shifting the locus of power to a supranational scale, and by dint of international agreements, render potentially significant differences in organic production practice moot.

Place of Production: Dominican Republic

To investigate whether and how the values consumers seek in third-party certified foods are translated through the supply chain, field work was undertaken in the banana growing regions of the Dominican Republic in 2007 and 2010 (see Figure 3). Sixty-five intensive, semi-structured interviews were conducted with certifiers, plantation owners, banana associations, small-hold farmers, exporters and labourers. The study area is located in the semi-arid banana growing regions in the North-west of the country, near the Haitian border and the primary banana exporting port near Monte Cristi.

As bananas cannot be grown in northern latitude nations, colonial holdings in the Caribbean have been important sources of bananas, particularly so for the British Isles. As such, post-colonial economic development schemes have focused on this historically important commodity for former colonies now struggling to establish ‘independent’ economies. For example, the Windward Islands and Jamaica had exclusive supply contracts to the UK through UK-based importers Geest and Fyffes, and thus dominated the supply of bananas to the UK until 1995. The loss of this due to American trade pressure, coupled with low economies of scale due to poor topography and soil quality, meant the small banana farms of the Caribbean islands, with



Figure 3. Map and study area.

their higher costs, could not compete with the industrial agriculture plantations of Costa Rica and Colombia. This was devastating to the banana-dependent small island economies of the south-eastern Caribbean, and for Saint Lucia, Saint Vincent, Dominica and Jamaica particularly (Grossman, 1998; F. W. Salmond, Managing Director Geest Bananas, pers. comm., August 2005).

Organic and fair trade certified bananas attempt to rewrite the history of the banana in developed economies. Economic development initiatives are increasingly encouraging the cultivation of organic products in the least developed economies of the world, due to their improved margins relative to industrialized conventional production. It is hoped that these initiatives will alleviate poverty and increase the standard of living in rural and agricultural communities. Bananas are cultivated throughout Latin America, parts of Africa and in the Mediterranean. The majority of bananas, however, come from the Caribbean islands and South American nations bordering the Caribbean. The Dominican Republic is a leading producer of organic bananas for the world market and has been an unparalleled success story for organic conversion. In 1998, none of the bananas exported from the Dominican Republic were organic, in 2004 75% were organic (Boshart, 2004).

According to primary data sources in the study area in 2012 about one quarter of all organic bananas were sold as fair trade certified. About one third of the fruit is sold as organic, but is not fair trade certified. Another one third is sold as conventional, but is fair trade certified. While about 80% of the growers are certified for fair trade production, not all the fruit is sold as such. The remainder (approximately 10%) is neither organic nor fair trade certified, and is likely sold directly to a supermarket, such as Tesco. Most producers selling through the three largest banana exporters are certified for organic production by NOP (US), JAS (Japan), EU (Europe) Bio Suisse (Switzerland) and Krau (Norway). The third largest exporter (Horizontes) is also certified by Demeter international for biodynamic production. The primary market for organic banana exports remains UK consumers, but the EU and US markets are also growing. Primary sources in the Dominican Republic indicated that 90% of organic certification is performed by a German certifier, BCS Öko-Garantie. There is currently no Dominican-based certifier, and sales of organic bananas in Dominican markets are very small.

Other certifications utilizing private standards carried by banana producers in the Dominican Republic include GLOBALG.A.P. and supermarket labels such as Tesco's Nature's Choice. GLOBALG.A.P. sets out to make farming practices legible to consumers (and others in the supply chain) through an exhaustive list of protocols regulating everything from seed stock to worker protection (Campbell, 2005). Tesco developed its own 'environmental and responsible' (Tesco, 2012) scheme 'Nature's Choice' as an attempt to distinguish its products from other similarly 'branded' organic or fair-trade products (Ouma, 2010). Certification is a costly process, and smallholding farmers join banana associations to share the costs that could not be borne by individual farmers alone (see also Mutersbaugh, 2002). Large-scale plantation operators (who are in some cases also the exporter) often bear the cost of certification for farmers who contract with them. In all cases, to capture the widest market, the banana associations, plantations and importer/exporters seek certification from as many third parties as possible. Organic and fair trade certifications still dominate the market, in spite of the influence of other private standards.

The topography of the Dominican Republic does not generally support the large-scale plantation agriculture seen elsewhere in the Caribbean. As such, organic ba-

bananas are much more likely to be cultivated by independent smallholding farmers and cooperatives than on plantations by large-scale corporations. Part of this can be explained by the experiences of multinational corporations that have previously located in the Dominican Republic: Chiquita withdrew rather abruptly from its arrangements in the 1980s and has only recently (along with Dole) looked to reinvest in the country (F. W. Salmond, Managing Director Geest Bananas, pers. comm., January 2007). A key requirement for organic production is a landscape either free of Black Sigatoka disease, or a dry environment where the fungal spores cannot thrive, because the infestation is difficult to manage with organic methods (FAO, 2001). The Dominican Republic has dry hillsides that were never cultivated intensively with bananas, and that lend themselves to small-scale production by smallholdings. The soils are deep, calcareous and have high natural fertility, which decreases the amount of imported and expensive approved fertilizers required for organic production (Willer and Yussefi, 2004). In addition, due to the stagnating economy, purchased conventional inputs such as pesticides were not commonly used, which facilitated rapid organic conversion (FAO, 2001). Lastly, the Dominican Republic promises two key advantages over its competitors: it is an ACP country, and thus benefits from the (increasingly marginal) benefits accorded; it also has a lower cost structure approaching that of the mass-producing nations of Central and South America.

As one of the first countries to export certified organic bananas, the Dominican Republic continues to supply a substantial proportion of the world market in organic bananas, and until 2006 was the single largest exporter of organic bananas (see Table 1; Liu, 2008; Vagneron and Roquigny, 2011). Dominican dominance has reduced from 50% of total organic banana exports in 2003 to 26% in 2007, but quantities have continued to increase, with exports totalling over 120 000 tonnes in 2010 (see Table 2; FAO, 2003b), about twice the values for 2005 reported by Reynolds (2008). Organic bananas are grown mainly in the rural provinces of Azua in the south and Valverde and Montecristi in the north (see Figure 3). The majority of farms have traditionally been small scale (less than two ha), primarily (but not entirely) utilizing family labour, with the use of hired labour on harvesting days. Interviews conducted with workers on these farms (n=16, all of whom were Haitian) reveal patterns of working for one or two days on a several small hold farms throughout the week. Plantations employ outside labour every day of the week, and primary data sources (both interviews and observation) indicate this labour force is 90% Haitian in the study areas. While small farms are still larger in number, the market has seen a number of mergers and farm size growth over the last decade. The market for organic bananas within the Dominican Republic is currently small (and data are uncertain), but is expected to rise with an increasingly urban and health-conscious population along with a growing tourist industry (FAO, 2001).

There are two structures for producing bananas for export in the Dominican Republic (Figure 4). The first structure is organized through banana associations, which bring smallholders into collectives large enough to produce enough bananas each week to fill containers. The second structure to the industry is composed of large-scale plantations greater than 60 hectares (by definition, these producers are excluded from participating in the banana associations). The expense of certification and the need for a certain volume each week prevents small-scale growers from operating independently, while the large-scale plantations can both manage the expense and the production volume. Both models use up to 90% Haitian labourers, some of whom are legally allowed to work in the Dominican Republic on one-year

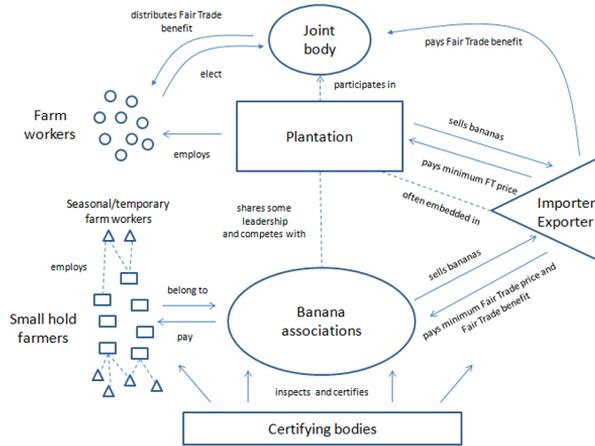


Figure 4. Structure of organic and fair trade banana production in the Dominican Republic.

temporary visas. Until 2011, on large-scale plantations the visas are paid for through the fair trade premiums administered through the joint body (see Figure 4). It was unclear how workers on the smallholdings obtained visas, which cost more than several months’ pay, and it is likely that they worked without legal documentation.⁴

All export is controlled by three companies owned and operated by expatriates from the Netherlands, Austria and Italy; each step of the production and export process is certified by third parties who have headquarters outside the boundaries of the Dominican Republic; there is no Dominican-based certifier. In addition to the ways supranational organizations simplify standards across nation states outlined above, certifying bodies shape production practices and promote particular production outcomes in the Dominican Republic in a variety of ways.

First, the structure of the banana industry distributes the one dollar premium per box of bananas given by fair trade benefit highly unevenly. In the plantation model, the dollar premium is appropriated and used by workers via the ‘joint body’ to provide clinics and schools, but also food and visas. In the banana association model, the premium is appropriated and used by smallholders via the governing structures of the banana associations to pay for clinics and schools as well, but not for food or visas for workers. Until 2011, The Fairtrade Labelling Organizations (FLO) allowed (or did not disallow) the fair trade benefit to be used to purchase one-year visas for the Haitian workers (and supplemental food). Haitian labour in bananas has increased from 60% in 2001 (FAO, 2001) to 90% in 2010 (based on observation and interviews), and the visas and generally higher wages in banana production encourage and facilitate migration to the Dominican Republic from Haiti. At the time of the research, plantation workers (both Haitian and undocumented Dominicans) such as Gerard said, ‘I don’t know what will happen when we lose our visas. We may be stopped on our way to work and sent to Haiti. The police check every person in every van.’ The gravity of the situation was underscored by the ongoing 2010–2011 cholera epidemic in Haiti.

Second, the current high prices for organic bananas, and the ease of entry to the market via the banana associations, attract new smallholders. The rapid influx of

farmers into production has created higher densities of banana plants (both organic and non-organic) in the banana growing areas. Higher densities mean higher infestation rates of Sigatoka in these areas, which was virtually unknown in the area a decade ago. The environmental manager at a large-scale organic plantation observed grimly, 'We've seen a 10-fold increase in Sigatoka, and with the higher densities of banana plants as more farmers enter the market, it will only continue to increase.' Many growers have dropped organic certification so that they could use aerially applied fungicides, leaving organic producers to battle Sigatoka with more costly and labour-intensive methods. One third of the producers we interviewed had started growing bananas in the past two years, and most expressed some version of Eduardo's comment as he showed us the difference between organic and conventional bananas in his accounting books, 'The money in organic bananas is really good right now! Who knows how long it will last, but I might as well try it while the prices are high. Look at those prices!' The motivating factor for engaging in organic production for most smallholders was short-term economic gain, rather than commitments to environmental or worker protections.

Lastly, fair trade, organic and other certifications require certain workplace facilities (i.e. bathrooms) workplace protections (i.e. limiting exposure to fungicides) and higher minimum wages (typically 200–300 pesos per day) within the banana industry: fair trade and other labels establish wages that are higher than the state minimum wage, which is 150 pesos per day. Ironically, the banana plantations are much more likely than the smallholdings to actually provide the required facilities, pay higher wages and purchase visas for workers, and these workers speak highly of the fair trade model. In contrast, a Haitian worker on a smallholding could not tell us what fair trade was or how this farm differed from other farms, regardless of the language we asked the question in, and in spite of the required signage in three languages on the walls of the packing shed. In his words, 'I work on this farm for a few days each week, and then I go to the next farm. The pay is the same.' Like all the workers on smallholdings that we interviewed, his clothing was stained brown from the aerial applications of fungicides while workers are in the fields: a clear and blatant violation of fair trade rules and organic standards.

Discussion and Conclusions

The market structure within the organic-food production system for local or regional food is still very fragmented and direct producer–consumer relations are a key aspect of it. This thinness of the market in the face of burgeoning demand (in concert with regulatory frameworks) has driven organic agriculture worldwide. However, the globalization of organic food, within the context of demand for tropical fruits and vegetables such as the banana, necessarily requires the intervention of intermediaries. This includes certification bodies, but also importers, wholesalers, retailers, and so on. It can also mean the entrance of transnational corporations, such as Del Monte or Chiquita and supermarket chains, seeking to diversify their businesses and products, and capture more of the value added in the growing market of organic food. Although consumers may be willing to pay a price premium for organically produced tropical products, these surpluses might not necessarily flow through to the farmers or workers

The increasing global demand for organic food and the changing regulatory environments within the nation state, however, have extended the reach of organic food

networks. The production of organic foods has been vertically integrated into large corporations in developed economies and the location of production is beginning to shift to developing economies while consumption has largely remained in an upper-class market in developed economies. This begs the question of whether third-party certified food produced in developing countries actually poses an alternative to conventional production, or if it is, as many have argued (e.g. Guthman, 2004a), simply another value-seeking behaviour on the part of transnational corporations. This has implications for the way in which organic food is marketed to consumers, as the purported organic values may no longer be consumable in the product. What has ostensibly not been in the product, may not actually outweigh what now is in the product.

For Europe and North America, the local supply of tropical fruit such as the banana is not a viable option. The cultivation of organic bananas in the major sites of conventional organic banana production is increasing. For the time being, however, countries such as the Dominican Republic and the Windward Islands, which lost the market for conventional bananas to mass plantations in Costa Rica and other South American producers due to poor economies of scale and therefore high costs, have a chance to regain exports of value by capturing the organic market. They realize this potential might require a shift to larger-scale production and a resulting loss of environmental resilience and sustainability in the pursuit of economic gain, as well as the continuation of better margins for organic bananas in the longer term.⁵ Supranational regulatory frameworks are key to this expansion of supply chains behind a circumscribed local economy for organic produce. The extension of the supply chain, however, brings with it the risk that the values promised through certification are not achieved, such as the degradation of the environment, or that there are unintended consequences, such as the semi-legal employment of an immigrant labour force.

The debate over the equivalence of local and global organic products is writ large in the alienation of producers and consumers that the certification process allows in extended supply chains. The intertwining of certifications, (e.g. organic and fair trade) for marketing purposes complicates an otherwise simpler narrative of 'environmentally friendly' or 'worker friendly'. The high prices attained for organic bananas drew more producers to the market, and encouraged existing Dominican Republic producers to scale up. This intensification led to an increased incidence of Black Sigatoka and ultimately greater application of fungicides as organic producers dropped organic certifications to cope with the fungus. Fair trade premiums bring benefits to workers in one production model, but not the other, and the fair trade labelled banana consumed in the UK could be produced in either model, with the consumer never knowing the difference. Consumers may presume all things are equal on the other end of the supply chain, encouraged by the simplification of complex processes into an easily identifiable label.

The moral equivalence between organic certifications that is supported by the labelling scheme and the 'equivalence agreements' between nation states is belied by the material realities of production in place-specific contexts. While producers may adhere to organic production practices in the Dominican Republic for short-term economic gain, those advantages are outweighed easily by the long-term economic costs of managing Sigatoka organically. The economically strategic use of certifications sets up a positive feedback loop that generates widespread environmental change, and the intensification of non-organic agricultural practices as the incidence of Sigatoka increases. Similarly, the bifurcated nature of the banana industry, be-

tween plantations and banana associations, leads to dramatically different benefits to the most vulnerable actors in the food supply chain. Because all fair trade bananas are aggregated together and packed on container ships for export, consumers can never know whether or not their banana was truly worker friendly. The source of this miscommunication lies with the standards that are supposed to allow for legibility in the supply chain, but which in fact are instrumental in obscuring as many critical aspects of the supply chain as they reveal.

While the inward-looking set of values is satisfied with organic product no matter its origin, the external set of values must be guaranteed through certification by external and often supranational organizations. This is signified by a trend toward certifying organic foods as also fair trade, and the emergence of 'certified naturally grown', and the marketing of food (organic or otherwise) as 'locally' grown. Whether these developments will actually provide the alternatives consumers demand remains to be seen, but supranational certifications will remain critical to the globalization of organic food supplies, whether or not they are able to deliver on the values they promise.

Notes

1. Sahota (2011) reports US organic food and drink sales comprised 90 per cent% of North American organic food and drink sales revenue, which are estimated at US\$26.3 billion in 2010. The US Department of Agriculture estimate total US food sales at US\$1,241 billion in 2010 (of which US\$646 billion is spent at home). Therefore US organic food and drink sales represent 1.9 % of US food sales; this ratio falls to 1.7% if alcoholic drinks are included in the denominator, and rises to 3.7% if only food sales at home are compared.
2. Note that under IFOAM Basic Standards the certifying body cannot also advise on farm practice (the third-party certifier rule). Thus SAFL is a subsidiary of the Soil Association, and only certifies, although references are blurred between both organizations on their respective websites.
3. While our concern is primarily with organic bananas, the two certifications are intertwined in the case of the Dominican Republic and cannot be completely separated for analysis.
4. The legal status of workers was not directly asked about directly, to avoid compromising informants.
5. The price differential between organic and 'conventional' bananas reduced in 2005 due to conventional production supply problems. The resulting price increase induced farmers to switch back to conventional production for short- runterm profitability. This creates a lag in eventual return to organic production due to certification requirements.

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