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Douglas H. Constance
Sam Houston State University

Jin Young Choi
Sam Houston State University

Holly Lyke-Ho-Gland
Sam Houston State University

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CONVENTIONALIZATION, BIFURCATION, AND QUALITY OF LIFE: CERTIFIED AND NON-CERTIFIED ORGANIC FARMERS IN TEXAS*

DOUGLAS H. CONSTANCE

SAM HOUSTON STATE UNIVERSITY

JIN YOUNG CHOI

SAM HOUSTON STATE UNIVERSITY

and

HOLLY LYKE-HO-GLAND

SAM HOUSTON STATE UNIVERSITY

ABSTRACT

Organic agriculture has been advanced as a production system that improves environmental quality and supports rural community development. Recent developments in organics have called into question both assertions. Researchers have argued that the advent of national-level organic standards has contributed to the conventionalization and bifurcation of organics. Conventionalization refers to the process by which organic agriculture increasingly takes on the characteristics of mainstream industrial agriculture. Bifurcation refers to the process by which the organic agriculture adopts a dual-structure of smaller, lifestyle-oriented producers and larger, industrial-scale producers. This research examines the conventionalization and bifurcation theses through a comparison of certified organic and non-certified organic producers in Texas. We conclude that the case of organics in Texas provides mixed support for the conventionalization thesis.

Introduction

The expansion of organic agriculture in the past few decades was seen as a hopeful trend with possible positive consequences in several ways (see Allen and Kovach 2000; Clunies-Ross 1990; Clunies-Ross and Cox 1994; Goodman 1999; Lampkin 1990; Lyson and Guptill 2004; Michelsen 2001; Pollen 2001; Pugliese 2001; Smith and Marsden 2004; Vos 2000). Organic agriculture would be better for the environment, farmers, farm workers, and consumers due to its limited synthetic chemical usage. Organic agriculture would be better for farmers and rural communities because the combination of smaller-scale operations, price premiums, and primary use of direct markets would support the development of local food systems. In summary, organic agriculture was seen as a promising alternative to what many perceived as the negative impacts of the industrial food system for

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producers, workers, consumers, the environment, and rural communities. Organic agriculture would improve our quality of life in numerous ways.

In the 1990s this optimistic view of the transformative potential of organics was called into question. Research in California (Buck, Getz, and Guthman 1997; Guthman 1998), Ireland (Tovey 1997), and the United Kingdom (Clunies-Ross 1990; Clunies-Ross and Cox 1994) suggested that the institutionalization of organics via the creation of organic certification standards was diluting the social movement components and replacing them with an industrial approach. The research from California introduced the concepts of conventionalization and bifurcation to interpret the trends. Conventionalization refers to the process by which organic agriculture increasingly takes on the characteristics of mainstream industrial agriculture. Bifurcation refers to the process by which the organic agriculture adopts a dual-structure of smaller, lifestyle-oriented producers and larger, industrial-scale producers. In response to these pronouncements, researchers in Canada (Hall and Mogyorody 2001), New Zealand (Campbell and Coombes 1999; Cambell and Liepins 2001; Coombes and Campbell 1998) and Europe (Kaltoft 2001; Lynggard 2001; Michelson 2001) criticized the conventionalization thesis as overly deterministic and weak on empirical support. While some early research from Australia and New Zealand often supported conventionalization (Lockie, Lyons, and Lawrence 2000; Lyons 1999), later research produced mixed results (Lockie and Halpin 2005).

Several researchers conclude that more empirical studies are needed on the topic of conventionalization and bifurcation before we can build theories to interpret the institutionalization of organics and other forms of alternative agriculture (Coombes and Campbell 1998; Guthman 1998; Hall and Mogyorody 2001; Lockie and Halpin 2005; Michelson 2001). This research contributes to this literature by testing the conventionalization and bifurcation theses in Texas through a comparison of “certified” and “non-certified” organic producers.

The paper begins with a brief overview of the development of organics in the U.S. and the ensuing regulations governing organic production. The next part presents an overview of the concepts of conventionalization and bifurcation. This section is followed by the literature review on conventionalization and bifurcation. Then the case of organics in Texas is presented divided into methods, results, and discussion. Finally, some conclusions are provided to context the Texas case within the larger discussion on conventionalization and bifurcation and the implications of these trends for quality of life issues in rural communities.

Some Background on Organics and Organic Certification

In the U.S., modern organic food production started in California in the 1960s as part of the counterculture ideological movement that rejected industrial values (see Belasco 1989; Guthman 1998; 2004c). Demand for organic foods grew steadily in response to increased consumer concerns related to pesticide contamination and other philosophical issues. In 1973 the first private organic certifying organization, California Certified Organic Farmers, was created to increase consumer confidence and limit fraud. The California Organic Foods Act of 1990 (COFA) established a legal definition of organics, including an acceptable materials list. COFA developed a “certified organic” label based on third-party certifications schemes. The COFA certified system became the model for other states’ organic certification regulations and the national certified organic label (Guthman 1998; 2004c).

The combination of increasing demand and the certified organic label prompted agribusiness firms to enter the market to capture the price premiums. Because the certified organic standards in California emphasized the regulation of inputs over processes (an acceptable materials list), agribusiness firms employed input substitution practices that met the organic standards but otherwise avoided the more costly agronomic practices associated with organic production. Simultaneously, the costs associated with certification created entry barriers that were more easily overcome by more capitalized firms. Researchers predicted that the adoption of the National Organic Program standards would similarly affect the whole country as many large firms were waiting for a system of national standards before moving into the organic market (Buck et al. 1997; DeLind 2000; Guthman 1998; Klonsky 2000; Vos 2000).

The passage of the Organic Standards Protection Act in 1990 included a mandate to establish the National Organic Standards Board (NOSB) under USDA to develop national regulations to govern the production and handling of certified organic foods.

The NOSB recommendations presented to USDA in 1994 were generally ignored in the drafting of the National Organic Program Proposed Rule released in 1997. The USDA version focused on allowable inputs rather than agro-ecological processes or socioeconomic dimensions of sustainable agriculture (Buck et al. 1997; Goodman 1999; Guthman 1998; Vos 2000). Not only did the Proposed Rule ignore the accepted organic practices recommended by NOSB, but it included the Big 3: genetically engineered foods, biosolids, and irradiation. After the public outrage over the Big 3 during the comment period, the USDA withdrew them from the Final Rule that became effective in October 2002. The Final Rule purposefully

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framed “certified organic” as a market label based on consumer preference with no claims to health benefits or environmental superiority included in the objective meaning of the label (Klintman and Bostrom 2004). A provision was included that allowed producers with less than \$5,000/year in organic sales to sell their product as organic without formal certification.

USDA data provides some support for the predicted effect of the NOSB on agribusiness entry (see Table 1). The U.S. had less than a million acres of organic cropland when Congress passed the Organic Foods Protection Act in 1990. By 2002, when the certified label was codified, certified organic farmland had doubled, and then doubled again by 2005. The organic livestock sector grew even faster (USDA/ERS 2007). For organic farmland, the percent change was greater in the 2002-2005 period than in previous periods; for livestock, the trend was reversed but still upward. Notice that while the number of organic operations did continue to grow in the 2002-2005 period, the rate of increase was lower than the previous two periods.

TABLE 1. U.S. CERTIFIED ORGANIC CROP ACREAGE, LIVESTOCK NUMBERS, AND FARM OPERATIONS: 1992 – 2005 (IN THOUSANDS).

ITEM	1992	1997	2002	2005	92-97	97-02	02-05
					CHANGE	CHANGE	CHANGE
<u>Farmland</u>							
Total.....	935.5	1,346.6	1,925.5	4,054.4	45%	43%	111%
<u>Pasture/ rangeland..</u>							
	532.1	496.4	625.9	2,331.2	-7%	26%	272%
Cropland..	403.4	850.1	1,299.6	1,723.3	111%	53%	33%
<u>Animals</u>							
Livestock..	11.6	18.5	108.4	196.6	59%	485%	81%
Poultry.....	61.4	798.3	6,270.2	13,757.3	1,201%	685%	119%
Operations*	3,587	5,021	7,323	8,493	40%	46%	16%

*number does not include subcontracted organic farm operations.

Source: USDA/ERS (2007), Table 2: based on information from USDA-accredited State and private organic certifiers.

Following the trend in production, the U.S. organics market more than doubled from 2000 – 2006 (DataMonitor 2007). Sales of organic food increased from \$5.5 billion in 1998 to almost \$14 billion in 2005. The governmental definitions created in 2002 supported the growth of the market by providing customers accurately-identified organic products. Agribusiness has changed its practices to meet the demand. As the organic industry has gone more mainstream, larger farms and

ranches have reduced their costs by streamlining their operations. Organic prices are dropping as production increases to meet demand, which will continue to expand (DataMonitor 2007). During the same time the conventional supermarkets rapidly increased their share of sales (OTA 2006). Over the past 10 years agrifood TNCs have bought up numerous organic operations and/or developed their own product lines (Howard 2005).

The data for Texas reveal a reversed pattern (see Table 2). The big increase in total certified organic acres in crops and pastureland and number of operations in Texas occurred in the 1997-2002 period. Certified-livestock rates of increase were higher in Texas than nationally in the 2002-2005 period (147% versus 81%, respectively). Notice that there is wide variation across the commodities. Some decreased in total certified organic acres (oilseeds and cotton), several increased moderately (grains, beans, fruit, and peanuts) and some increased substantially (livestock, hay/silage, and vegetables). In 2005, Texas ranked sixth in total cropland acres (87,124 thousand) and second in pasture acres (241,353) (USDA/ERS 2007).

TABLE 2. CERTIFIED ORGANIC CROP ACREAGE, LIVESTOCK NUMBERS, AND FARM OPERATIONS IN TEXAS: 1997 – 2005.

	1997	2002	2005	97-02 CHANGE	02-05 CHANGE
Pasture and Crops					
(totals).....	30,80	279,506	328,477	805%	18%
Livestock.....	n/d	21,000	52,000	n/d	147%
Grains.....	10,850	18,259	30,864	68%	69%
Beans.....	1,218	6,646	7,324	446%	10%
Oilseeds.....	7	630	180	8,900%	-71%
Hay/Silage.....	3,075	1,533	7,712	-50%	403%
Vegetables.....	264	246	625	-7%	154%
Fruit.....	1,334	1,335	1,799	0%	35%
Other (totals).....	10,321	14,688	38,019	42%	158%
Cotton (other).....	8,134	7,550	6,952	-7%	-8%
Peanuts (other).....	1,780	3,104	4,977	74%	60%
Operations*.....	2	150	192	7,400%	22%

*number does not include subcontracted organic farm operations.

Source: USDA/ERS (2007), Tables 5-11, 13: based on information from USDA-accredited State and private organic certifiers.

Conventionalization and Bifurcation

Buck et al. (1997) introduced the concept of “conventionalization” to analyze the ongoing changes in organic food production in California. They operationalized conventionalization through two analytical concepts: appropriation and substitution (see Goodman, Sorj, and Wilkinson 1987). These terms are used to interpret the processes of capitalist penetration into agriculture, what is called “the agrarian question” (see Buttel and Newby [1980] for an overview). The “agrarian question” asks, “How does capitalism penetrate agriculture given that the dependence on land creates certain obstacles to direct capitalist involvement.” The risks of production due to nature and the seasonality of production create disincentives that limit capitalist penetration (see Mann 1990). To reduce risks associated with direct investment in agriculture, agribusiness seeks profits off the farm. At the upstream level agribusiness removes fertilizer production (manures) and pesticide practices (rotations) from the farm and refashions these functions as agrochemical inputs (chemical fertilizers and pesticides). This process by which products and processes once carried out on the farm are moved off the farm is called appropriation. Downstream, once the products leave the farm agribusiness firms engage in value-added activities and/or assert control in the processing, distribution, and retailing links in the commodity chain. The process whereby post-production activities capture a higher proportion of the total value of commodities is called substitutionism. Through appropriation and substitutionism, agribusiness penetrates organic agriculture through the production of inputs and the processing of outputs (Guthman 2004b). As a result, organic agriculture becomes more conventional.

For Buck et al. (1997), bifurcation is an outcome of conventionalization. As agribusiness enters organics, a bipolar production system ensues made up of larger conventional operations that mix input substitution strategies with monoculture production of high value crops targeted to indirect markets while smaller farms employ artisanal practices to grow a variety of crops using more sustainable agronomic practices targeted to direct markets. The categories describing the bifurcation of organics have been called: “pragmatic” versus “pure” (Clunies-Ross 1990; Clunies-Ross and Cox 1994); “conventional” versus “artisanal” (Buck et al. 1997); “agribusiness” versus “lifestyle” (Guthman 1998); “interdependent lifestyle/domestic/small-scale” versus “export/commercialized” (Coombes and Campbell 1998); “chemical-lite” versus “movement” (Goodman 2000); “productivist/reductionist” versus “holistic” (Vos 2000); “lifestyle” and “conventional” (Campbell and Liepens 2001); “philosophical” versus

“pragmatic/instrumental” (Lockie et al. 2000); “organic lite/shallow” versus “deep organic” (Guthman 2004b); and “old guard” versus “new entrants” (Guthman 2004b).

The Debate on Conventionalization

Although Buck et al. (1997) were not the first to cast doubts on the transformative ability of organic agriculture to alter industrial agricultural (see Clunies-Ross 1990; Clunies-Ross and Cox 1994; Friedmann 1993; Lampkin 1990; MacRae, Henning, and Hill 1993; Rosset and Altieri 1997; Tovey 1997), they were the first to research the structural trends taking place in organics systematically. This research has continued through Guthman (1998; 2000; 2004a; 2004b; 2004c) and has contributed to a growing literature that critically evaluates both the conventionalization thesis and the bifurcation thesis.

As organics moved beyond its niche status in California, agribusiness entered the market to capture the monopoly rents associated with the price premium (Buck et al. 1997). The formal organic standards that emphasized inputs over processes allowed agribusiness to employ input substitution practices that met the minimum organic standards but avoided the costly agronomic practices associated with ecological sustainability. By focusing on allowable inputs, organic regulation preempted broader agronomic processes and encouraged entry by institutions with “questionable commitment” to sustainable agriculture (Guthman 1998:147). The result is a form of agriculture that differs from conventional systems only by using organic inputs (Buck et al. 1997; Guthman 1998). As part of conventionalization, the organic label is co-opted by the large firms thereby blunting its transformative potential as it is appropriated and subsumed (see Goodman 1999; Goodman et al. 1987) by corporate actors (Buck et al. 1997; Guthman 1998).

Buck et al. (1997) also found a “bifurcation” of organic producers in California characterized by large operations specializing in the mass production of a few high profit crops and smaller farms that employ artisanal methods to grow a variety of marketable crops. In this system the smaller operations often occupy the more marginal lands while the larger ones secure the expanses of certified organic land. The agribusiness ventures were more likely to employ larger numbers of migrant labor, although due to the greater mixture of crops, the smaller operations were more likely to provide year-round work.

Buck et al. (1997) note that it is in the marketing and distribution of organics that conventionalization is most dramatic. Large organic food retailers’ preference for certified organic products limits their access by non-certified producers. As a

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result, the growing bifurcation relegates the smaller operations to the marginal markets, i.e., farmers markets and subscription farming, as the larger farms service the retailers and indirect markets. They maintain that these localized, direct-marketing arrangements that “illustrate the promise of local networks of direct grower-to-consumer links, are effectively default choices for growers with few resources” (Buck et al. 1997:14).

They note that the politics of organic regulation influences what kinds of producers (agribusiness or lifestyle) benefit. Guthman argues that the technical approach and resulting conventionalization contribute little to “sustainability – either socially or ecologically” (1998:143). While admitting the California focus of the research, they predicted that national organic standards would accelerate conventionalization as agribusiness reshaped “organic agriculture to its own advantage” (Buck et al. 1997:16-17). Guthman (1998) concludes that California is the exemplar and model of a broader process whereby nature is appropriated through the regulation and cooption of the organic label.

Research from Australia and New Zealand (Lockie et al. 2000; Lyons 1997; 1999) on the growth of organics as a form of “opportunistic corporate greening” (see Buttel 1992) provides some additional support for the conventionalization thesis. Lyons (1999) notes that Uncle Toby’s “healthy for you, healthy for the environment” campaign exhibited instrumental rather than substantive support for organics. Farmers recruited to convert to organics often had a “pragmatic/instrumental approach” whereby organic farming meant compliance with minimum certification requirements rather than a “philosophical” approach (Lyons 1997). The Heinz Wattie “corporate greening” system typified conventionalization through vertical integration and the concentration and centralization of capital (Lockie et al. 2000). Such “corporate greening” in Australia and New Zealand has “contributed to the appropriation of the organic industry by infiltration within conventional agricultural networks” (Lyons 1999:262).

While Campbell and his associates (Campbell and Coombes 1999; Campbell and Liepens 2001; Coombes and Campbell 1998) agree that organics is experiencing conventionalization and bifurcation, they disagree that the impacts are necessarily negative and inevitable. They found a “relatively stable” bifurcation of the organic industry in New Zealand characterized by an interdependent lifestyle/domestic/small-scale sector of perishable goods and an export/commercialized/conventional sector of green durable goods (Coombes and Campbell 1998). They do note that the impetus for national certification standards was the export industry focused on “green products” to Northern markets

(Campbell and Coombes 1999). Although some smaller producers opted out of certification because of this shift, the export industry expansion benefited the smaller growers because it enhanced the legitimacy of organics. They see this as a durable arrangement with no signs of marginalization of the smaller growers.

In their criticism of the linearity of the conventionalization thesis, they noted that the meaning of organics changed over time as different actors entered the policy arena. They maintain that these shifts show “clearly that the local industry is not engaged in a linear trajectory toward ‘conventionalization’ or the uncontested assumption of industrial agricultural forms” (Campbell and Liepens 2001:36). They conclude that contrary to Guthman’s view, organics in New Zealand reveal a “peculiar quality” about organics that enables it to continue as a counterpoint to a globalizing food system. They emphasized the need for more empirical studies before the construction of prescriptive theories can be undertaken.

Several articles in 2001 reported empirical studies that are useful in expanding on the early work from California and Ireland (Tovey 1997) that argued that organics was losing its alternative characteristic. Michelsen (2001) used the term “institutionalization” to describe the quantitative changes in the social organization of organic production. Like Campbell and his associates, he criticized the conclusions of the early studies for generalizing from too limited data and called for more studies to inform the discussion.

Lynggard’s (2001) work in Denmark and Belgium discovered several institutional factors that affected the structure of the organic farming system. He concluded the variation in these factors produced very different institutional arrangements regarding organics. This research casts doubts on universalistic interpretations of the trajectory of organics and highlights the importance of national/regional contexts.

Kaltoft’s (2001) research in Denmark revealed that the process of the institutionalization of organics through the government adoption of certification standards and incentives for organic conversion reduced the “broader, value-laden, and ideological formulations of the Danish Association of Organic Agriculture to technical and quantitative definitions and rules” (Kaltoft 2001: 148). With institutionalization, secondary production and processing and distribution and retailing through conventional venues developed rapidly. He concludes that organics stops being a social movement once it becomes institutionalized and integrated into the global food system. While certain organic producers might have strong ideological orientation and will resist corporate penetration of organics, for

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the government and industry organic farming becomes a technical solution to environmental problems (see Tovey 1997).

Research by Hall and Mogyorody (2001) in Ontario, Canada found mixed support for the conventionalization thesis. Their research on certified and non-certified organic operations showed that farms that had moved into organic production recently were often larger, but they did not fit the pattern of specialized monoculture for indirect markets. They found an increase in the number of farms specializing in field crops without a livestock component for the manure, an indication of conventionalization. They found very little use of migrant labor and no relationship between farm size and amount of migrant labor use. They did note that organic farmers often rely heavily on family labor and other non-wage laborers.

Regarding the destination markets for organics, they found different patterns by commodity but no evidence of a bifurcation between large and small growers targeted to different markets. The vegetable/fruit farmers were often direct marketers, while the row crop farmers used indirect markets more often. They did discover a short but rapid shift to organic soybean production when the price peaked. Similarly, groups of farmers formed marketing coops to sell in global markets. These last two points lend some support to the conventionalization thesis (Hall and Mogyorody 2001).

Regarding ideological orientations, they note that larger farms and newer farmers were more likely to have a profit orientation. Yet on the other ideological aspects, they found no significant differences across the groups. This evidence provides some limited support for the idea that the movement of conventional farmers into organics represents a potential shift in the ideological orientation of organic farming (Hall and Mogyorody 2001).

Hall and Mogyorody (2001) attribute these results to the particular institutional and biophysical arrangement of organics in Ontario and Canada that might limit both conventionalization and bifurcation (see also Lynggard 2001 above). They conclude that there was little evidence in support of conventionalization or bifurcation, but the situation could change quickly. They agree with Coombes and Campbell (1998), Guthman (1998), and Michelsen (2001) that more empirical studies that compare national and regional arrangements are needed on the topic of conventionalization and bifurcation.

In addressing the critics of conventionalization, Guthman (2004b) argues that the current situation in California provides further support for her original theses (see also Guthman 2004a; 2004c). Through mergers, acquisitions, and contracting

agribusiness has rapidly increased its organic operations in California, as well as New Zealand and Australia, with most of the growth from converted conventional operations. These highly capitalized operations out-compete smaller producers via economies of scale. Industry entry means increased price competition, a drop in price premiums, a lowering of farm-gate premiums, and a weeding out of some lifestyle producers (Guthman 2004b; see also Smith and Marsden 2004 below). The farm-gate price squeeze creates further pressure to intensify.

Agro-industrialization affects all organic growers due to the incorporation of organic premium values in land prices, then forcing growers to farm more intensively to pay for the land. (Guthman 2004b). In California, state supports for irrigation, cheap labor, and agro-technologies enhance intensification, i.e., more crops per year in less time, which is then capitalized into land values (Guthman 2004c). The industrial “organic lite” model constrains the continuance of the “deep organic” lifestyle model. For Guthman this paradox “is hardly the recipe for the spread of sustainable agriculture” (2004a:525). These wider processes of agro-industrialization cast doubts on the long term viability of the “multiple paths to sustainability” put forth by Campbell and associates in New Zealand (Guthman 2004b).

Whether the California model is inevitable, as criticized by Campbell and Liepins (2001), depends on the policy environment and levels of state support for a deeper model of organics. It is not that conventionalization is inevitable, but rather that it will take creative state policies to change the direction from agro-industrialization to a holistic organic system. “In short, the imperative of agricultural intensification—resulting from long-term *processes* of agro-industrialization—poses the largest threat to an ecological farming strategy” (italics in original, Guthman 2004b: 312).

Smith and Marsden (2004) provide some support for Guthman’s point by documenting the emerging negative trend in organics in the UK whereby the “farm-gate price squeeze” restricts the positive contribution of organic agriculture as a means to rural development. They link the squeeze to the growing oligopsonistic position of major supermarkets in organic retailing, a phenomenon associated with conventional food supply chains whereby the supermarkets increasingly “drive the chain” and producers have to adopt more intensive production strategies to compete with imports and stay in business. Price wars to gain market share means lower prices paid for organics and the resulting “farm-gate price squeeze” that drives the smaller/indigenous producers out of business. Left to the free market, the “value capture” of organics is shifting from producers to

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retailers. They predict that the market for organic foods in the UK and Europe is about to hit a “ceiling,” and without government policies that incorporate this perspective, organics will lose its contributive role regarding rural development. To test the conventionalization thesis, Lockie and Halpin (2005) provide an empirical assessment the Australian organic sector. For them, the debate on conventionalization centers on to what degree it is an inevitable phenomenon. In other words, is the California case as presented by Guthman (2004b) the ensuing model or is there room for social movement resistance and/or strong state-support to avoid the inevitable (see Hall and Moggyorody 2001; Michelsen 2001). Their research problematizes the bifurcation between small-scale/artisinal/lifestyle/deep organic producers and large-scale ex-conventional/industrial/shallow organic producers as part of conventionalization.

Using gross farm receipts as their measure of farm size, Lockie and Halpin (2005) found a normal distribution and not bifurcation, although grazing/cereal farms are often bigger than fruit and vegetable farms. There was no support for the position that recent entrants into organics were often conventional transitions rather than organic startups and there was no evidence that new entrants are larger or smaller than existing growers. Both new entrants and organic startups planned expansion with some differences across commodities. Across all commodity groups, most operations sold a small amount of production direct to consumers and the rest in indirect markets. There was no significant relationship between size and type of market channel.

On the issue of motivations and attitudes about organic farming, while there was a difference between conventional and organic farmers, it was more in intensity than direction. Among organic farmers, no significant differences were found on any motivation issue related to farm size or transition versus organic startup. There were some differences between commodity groups. There were no significant differences between start ups versus converts regarding environmental attitudes. Differences regarding size, expected expansion, and attitudes existed across commodity groups whereby larger farms were less concerned about land degradation. There was also a small negative relationship between farm size and perceived benefits of organic foods. In summary, few significant differences related to scale and motivations. The same pattern held for converting and startup operations.

Lockie and Halpin (2005) found no evidence of increasing polarization into expanding large operations and marginal small operations; both types planned to increase. There were differences across commodity groups regarding expectations

to increase, but not regarding size. The overall expansion argument does fit the “agro-industrialization thesis” (Guthman 2004a) but there is no evidence that the smaller farms will be marginalized. Similarly, some research showed how agribusiness has solicited and/or organized large conventional growers to convert (Guthman 2004a; Lockie et al. 2000; Smith and Marsden 2004), while there are rumors that this is being considered, there was little evidence in Australia.

Lockie and Halpin (2005) conclude that their research in Australia provides some support for the conventionalization thesis but little regarding bifurcation. Their findings of no significant differences in motivations, farm structure, and scale “is sufficient to throw doubt on the bifurcation elements (both ideological and structural) of the conventionalization thesis” (Lockie and Halpin 2005:304). Lockie and Halpin also call for more detailed empirical studies before theories are constructed.

The Case of Organics in Texas

This research responds to the repeated calls in the literature for more empirical studies that capture the importance of national/regional contexts. The purpose of this paper is to examine whether the case of organic farming in Texas supports the conventionalization and bifurcation theses. A recurring theme in the literature is the purported influence of organic certification standards on the structure of organic farming. More specifically, organic standards, in the form of the national certified organic label, have contributed to conventionalization and bifurcation. While other research has included both certified and non-certified producers in their research (Hall and Mogyorody 2001), comparisons between the two groups were not a central focus. The comparison of “certified” and “non-certified” organic producers is our unique contribution to the literature.

Methods

Research on organic producers and consumers was conducted during Winter 2004 and Spring and Summer 2005 using focus group and survey methods. This research looks at only the organic producers. Focus groups were conducted in the five TOFGA (Texas Organic Farmers and Growers Association) regions of the state. TOFGA regional directors solicited the participants and organized the meetings. The focus groups were taped and translated. Producer focus groups ranged from 10 to 20 participants. Topics included market outlets, types of products, information needs, reasons for producing organically, and organic certification. A dominant theme in all five focus groups was the tension between

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certified and non-certified organic producers regarding the issue of organic certification.

Information from the focus groups was used in combination with previous questionnaires to create a survey instrument. Two groups of respondents were surveyed: members of TOFGA (both consumers and producers) and certified organic producers registered with the Texas Department of Agriculture. Potential respondents were sent a self-administered survey questionnaire with a cover letter explaining that the purpose of the project was to enhance the marketing opportunities for organic products in Texas. After two weeks, a reminder postcard was sent to those who had not returned the survey. Of the 89 surveys returned from producers, five were not completed. A total of 84 cases was used in the final analysis; 50 were certified producers and 34 were non-certified producers.

To address the research question regarding if the case of organics in Texas supports the conventionalization and bifurcation theses, we test several hypotheses gleaned from the literature and some developed ourselves. Our general hypothesis grounded in the literature is that the “certified” organic farmers will exhibit the characteristics of the “conventional/agribusiness” model of bifurcation and the “non-certified” will be more similar to the “lifestyle/holistic” model. The specific hypotheses are discussed under each substantive area of study. For this investigation, we look at socio-demographic and economic characteristics, markets for organic products, reasons for farming organically, structural characteristics of organic farms, and attitudes toward organic certification.

Results

Socio-demographic and economic characteristics.

Following the bifurcation thesis, the conventional type organic farmers should be larger than the lifestyle types. The research in Ontario (Hall and Mogyorody 2001) and New Zealand (Coombes and Campbell 1998) supported this position, while the later work in Australia (Lockie and Halpin 2005) did not. We use gross farming income as our measure of size (see Lockie and Halpin 2005). Table 3 shows statistically significant differences between certified and non-certified organic producers regarding gross farm income and organics as a percentage of total household income. Certified organic farmers often make more money from organic farming, as well as rely on organic farming for a larger percentage of their household income. Notice that about 55% of non-certified producers gross less than \$5,000, while 50% of certified producers gross \$50,000 or more in organic sales. Similarly, for almost 80% of non-certified producers, organic sales make up 25% or

less of their household income, while organic sales contribute to 76% or more of family income for almost 30% of certified producers. In summary, the polarization between the two groups regarding these two economic aspects supports the bifurcation thesis. More specifically, these results lend support to Guthman's position that the "lifestyle" farmers are relegated to more marginal markets as part of conventionalization.

TABLE 3. SOCIO-DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS.

	CERTIFIED (N=50)	NON- CERTIFIED (N=34)	TOTAL (N=84)
Gender			
Male.....	78.0	63.6	72.3
Female.....	22.0	36.4	27.7
Race			
White.....	83.1	84.8	83.1
Other.....	16.9	15.2	16.9
Age*			
<60 years old.....	80.0	57.6	71.1
>= 60 years old.....	20.0	42.4	28.9
Education*			
<=high school.....	22.0	2.9	14.3
Some/Completed college.....	50.0	50.0	50.0
Some/Completed Graduate degree....	28.0	47.1	35.7
Gross organic farming income*			
< \$5,000.....	26.0	54.5	37.3
\$5,000 - \$49,999.....	24.0	36.4	28.9
\$50,000 & higher.....	50.0	9.1	33.7
% of household income from organic sales*			
1% - 25%.....	46.9	78.1	59.3
26% - 50%.....	14.3	12.5	13.6
51% - 75%.....	10.2	0.0	6.2
76% - 100%.....	28.6	9.4	21.0

* $p \leq .05$

We expect non-certified producers to more likely be women, older, and more educated due to the "lifestyle" approach to organics. The data do not support this assumption regarding gender, but there are significant differences in age (when measured as "less than 60" and "60 and older") and education. As expected, the non-certified group members are often older and more educated. Regarding race, both groups are overwhelming white.

Markets for organic products

While conventionalization is predicted to lead to a bifurcation of market activity whereby the lifestyle producers focus on direct markets and the conventional producers sell in indirect markets, the literature is split on this point. Research from California and New Zealand found this type of bifurcation while that in Ontario and Australia did not. To test this market bifurcation assertion, we combined the categories “farmers markets,” “farm stand/store,” and “restaurants” into a “direct markets” variable and the categories “grocery store,” “wholesale,” and “processor” into an “indirect market” variable. We kept the “natural food store” category discrete because these stores can be both small, health food-type stores that cater to more direct sales as well as larger superstores like Whole Foods that source from indirect markets. Our results lend some support to the bifurcation thesis (see Table 4). Non-certified producers are more likely to sell in direct markets with marginal significance, while certified producers are significantly more likely to sell in indirect markets. Similar to other studies, selling in both direct and indirect markets was common for our respondents. The certified producers have a higher market participation with natural food stores than non-certified producers (36% and 8.8%, respectively).

TABLE 4. MARKETS OF ORGANIC PRODUCTS.

TYPES OF MARKETS	CERTIFIED	NON-CERTIFIED
Direct markets*		
Yes.....	56.0	76.5
No.....	44.0	23.5
Indirect Markets**		
Yes.....	64.0	41.2
No.....	36.0	58.8
Natural Food Store***		
Yes.....	36.0	8.8
No.....	64.0	91.2

*: $p < .1$; **: $p < .05$; ***: $p < .01$

Reasons for Farming Organically

The literature posits that conventionalization will lead to a dilution of the “deep organic” philosophical underpinnings of organic production. The California research and the early research in New Zealand and Australia (Lockie et al. 2000) supported this position. Although the Ontario study found no difference on the philosophical motivations between the conventional and lifestyle groups, a significant divergence was noted regarding economic orientation. Later research in

Australia found no significant differences between groups regarding any motivational factors. To analyze this hypothesis in our study, we created two composite variables using factor analysis: economic ($\alpha=0.74$) and ideological ($\alpha=0.90$)¹. Results reported in Table 5 show that while the certified producers were significantly more likely to farm organically for economic reasons, there was no difference between the groups regarding ideological orientations. Both groups exhibited consistently strong support regarding the philosophical reasons for farming organically. Our results tend to concur with those from Ontario.

TABLE 5. REASONS FOR FARMING ORGANICALLY.

REASONS	MEAN	STANDARD DEVIATION
<u>Economic</u> ^{***}		
Certified.	3.78	.79
Non-certified.	3.24	.94
<u>Ideological & Environmental</u>		
Certified.	4.19	.87
Non-certified.	4.30	.92

***: $p < .01$

Structural Characteristics of Organic Farms

The literature generates several hypotheses regarding structural issues of organic farming. Following the conventionalization thesis, our certified farmers should (1) have been farming longer overall, but (2) should have been farming fewer years organically because (3) they have transitioned into organics rather than started as organic. They should (4) be more likely to both own and lease land, (5) hire more non-family than family labor, (6) have a lower rate of full time than part time employment on the farm, (7) farm full-time instead of part-time, and (8) be more likely to have expansion plans compared with non-certified producers. The reviewed studies often support these assertions (where dealt with), except for the later research from Australia (Lockie and Halpin 2005). They found no difference between the “transition into organics” and “organic startup” groups regarding

¹The economic composite variable included the following reasons: organic price premiums; growing consumer demand; to reduce input costs; to maintain economic sustainability of the farm; and provides economic support on fewer acres. The ideological composite variable include the following reasons: quality of organically grown products; land stewardship, ecological sustainability; chemical avoidance for environmental health; chemical avoidance for family/farmworker health; philosophical/spiritual/ethical; community value/quality of life; and animal welfare.

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length of time farming organically. Additionally, they found both groups had expansion plans.

Results presented in Table 6 reveal that certified producers have been farming in general and organically a significantly longer period. The former result supports the conventionalization and bifurcation theses and the latter does not. The certified farmers do have a longer history in agriculture but are less likely to be the “new entrants” than the non-certified farmers. Contrary to the expected results, there is no significant difference between the two groups regarding the path to organic farming. More than half of the respondents in both groups began as organic startups rather than transitioned into organics. While there was a marginally significant difference regarding plans for expansion, the results run opposite the expected direction. About 80% of non-certified farmers reported expansion plans compared with 66% of certified farmers. This result does not support the marginalization of lifestyle producers assertion associated with the conventionalization and bifurcation theses.

The issue of land tenure patterns is not dealt with specifically in most of the literature. The California research alludes to the tendency for the conventional operations to expand to achieve economies of scale. We expect that the certified producers, because they exhibit more conventional farming characteristics, would be more likely to both own and rent land to achieve economies of scale. Our research does not support this position. There was no significant difference in the land tenure pattern between the two groups. This result runs counter to the conventionalization and bifurcation theses.

The literature is inconsistent and thin on the topic of labor use. The research from California reports that the conventional farms employ more non-family labor, while the Ontario study notes no difference in labor use patterns, but a high reliance of family and non-wage labor by all organic farm types. The California research noted that the lifestyle producers were more likely to provide year-round employment due the less seasonal and more diverse characteristics of the operations. In our study, while both groups often relied more on family than non-family labor, certified farmers have significantly higher non-family labor employment rates. Similarly, the certified farmers are more likely to farm full-time than their counterparts. These findings support the bifurcation thesis. Nevertheless, our data show that the certified operations often employ more employees full-time than the non-certified (59% versus 44.5%, respectively). This result does not support the bifurcation thesis.

TABLE 6. STRUCTURAL CHARACTERISTICS OF ORGANIC FARMS BY TYPE.

	CERTIFIED	NON-CERTIFIED
<u>Farming History</u>		
Years farming**	21.99 (15.96)	14.15 (14.22)
Years organic farming*	13.36 (9.75)	9.15 (11.95)
Years certified organic.	8.40 (5.35)	NA
<u>Tenure pattern</u>		
Own only.	73.5	78.8
Own/lease & lease only.	26.5	21.2
<u>Path to organic farming</u>		
Transition from conventional.	44.0	42.4
Begin farming using organic methods.	56.0	57.6
<u>Future plans*</u>		
Expanding.	66.0	82.4
Not expanding.	34.0	17.6
<u>Full/Part time farmer***</u>		
Full-time.	75.5	42.4
Part-time.	24.5	57.6
<u>Labor composition</u>		
% family members***	63.78 (30.12)	83.95 (25.48)
% full time employee*	59.02 (35.44)	44.47 (38.12)

* p<.1; ** p<.05; *** p<.01

Attitudes toward certification

The issue of organic producer's attitudes toward certification is not covered extensively in the literature. There are some anecdotal references that with the advent of a national certified organic label and entry by agribusiness, some producers have chosen to drop their organic certification and rely on the "trust system" of direct marketing (Campbell and Liepens 2001). Because the issue and impact of certification are central to our paper, we include some comparisons between the two groups to shed new information on this topic (see Table 7). The measure is a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Notice that there is a statistically significant difference between the two groups on most items. Some items we discuss apply to only one group.

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To begin, both groups think that the NOP standards have further complicated the organic certification process. Although both groups indicate that certification helps them get a better price for their products, certified producers are significantly more supportive than their counterparts. This finding complements the research in New Zealand (Coombes and Campbell 1998) that argued that national certification standards benefitted both domestic and export sectors by legitimizing organics. The two groups diverge significantly on the issue of the necessity of organic certification for small-scale direct sales. Recall that the more than 50% of the non-certified producers report gross organic sales of less than \$5,000, a level below the legal threshold for required certification to advertize as organic.

TABLE 7. ATTITUDES TOWARD CERTIFICATION.

	CERTIFIED	NON-CERTIFIED
Since the adoption of National Organic Program standards, organic certification is simpler and easier.....	2.37 (1.06)	2.55 (0.93)
Organic Certification helps me get a better price for my products. **	3.98 (1.16)	3.14 (1.15)
Organic Certification is not needed for small scale direct sales of organically grown products. **	2.12 (1.20)	3.47 (1.24)
My customers expect me to be certified. **	4.06 (1.11)	2.47 (1.02)
Organic Certification helps me make a better living at farming. **	3.73 (1.01)	2.95 (0.90)
I am certified because most of my product is sold to indirect markets.	3.12 (1.36)	NA
I am certified because I have to be certified to sell my product as organically produced.	4.04 (0.96)	NA
I don't need organic certification because my customers trust me. **	2.02 (0.94)	3.44 (1.32)
I am not certified because certification is too expensive for the small size of my operation.	NA	3.76 (0.95)

** : p<.01

Certified producers assert that their customers expect them to be certified, not so for the non-certified group. Certified producers strongly support the statement that certification helps them make a better living from farming, while non-certified farmers are almost neutral on this point. Certified producers show stronger

agreement that they are certified to sell their product as organically produced rather than the influence of indirect market destinations.

Non-certified farmers maintain that their customers trust them so they do not need certification, not so with the certified group. The data show that the costs of certification negatively influence small farmers' willingness to be certified. These results resonate with the study from New Zealand (Campbell and Liepens 2001) that reported that some lifestyle farmers dropped their certification as the fees increased and targeted their uncertified production to local/regional markets on the "trust" system.

Discussion

The purpose of our research is to add the "certified" versus "non-certified" dichotomy as another approach to the investigation of the conventionalization and bifurcation theses. Our research in Texas provides mixed support for these theses. In several instances the certified organic producers did exhibit "conventional" characteristics and the non-certified fit with "lifestyle" qualities, but on some variables the predicted associations did not hold. In spite of the limitations of generalizing the study results to all organic producers in Texas due to the convenience sample and small number of respondents, our comparison of certified and non-certified organic producers remains a unique contribution to the literature. Like the previous studies from other parts of the world, the case of organics in Texas contains some regional peculiarities.

Economic bifurcation is significant with half the certified group reporting \$50,000 or more in annual gross organic sales while over half the non-certified group reported less than \$5,000. A similar pattern prevailed regarding percentage of household income from organic sales. The non-certified producers also were often older and more educated, an indication of the lifestyle dimension of this group.

The data on market destinations also support the bifurcation thesis; although both groups often sell in both direct and indirect markets, certified producers often sell more through indirect markets and non-certified in direct markets. Motivational factors for farming organically exhibited a pattern similar to the Ontario study. While the certified group showed a stronger economic orientation, no differences were regarding ideological and philosophical reasons for farming organically. This result supports the position that economic motivations are positively associated with conventional more likely

The farm structure research generated mixed results. While the certified producers have been farming longer, as expected, they have also been farming

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longer organically, as not expected. Additionally, no difference was found regarding either tenure pattern of the operation or the path to organics. Similarly, both groups planned to expand. These results run counter the conventionalization idea that the recent entrants are often conventional types pursuing economies of scale through expansion and that the lifestyle group is being marginalized and therefore not expanding. The topic of labor composition provides more mixed results. While both groups did use family members at a high rate and the certified producers employed more non-family labor, the non-certified group did not provide more full-time employment.

Our research on organic producer attitudes and opinions about organic certification show a strong split between the groups on several items. Both groups agree that the new NOP organic standards have not made certification simpler or easier but that organic certification usually helps them get a better price. Yet after this agreement, they are sharply divided into two camps over the need and utility of organic certification by type of operation. The non-certified/lifestyle group relies more on the trust system of direct markets and the certified/conventional group depends on the certified organic label to meet their customers' expectations in indirect markets.

In summary, the certified respondents are often larger, use indirect markets, and are economically motivated compared with their non-certified counterparts. They also have been farming longer, farm full-time, and use more non-family labor. These results support the conventionalization thesis. Yet contrary to expectations, there are no significant differences between the two groups regarding length of time farming organically, path to organic farming, tenure pattern, or plans for expansion. These results run counter to the conventionalization thesis. The two groups have opposing opinions of the necessity of organic certification and small-scale direct sales.

Conclusions

“Organics without a social vision is dangerously incomplete” (DeLind 2000:204).

The material covered in this research indicates that the original hope of organic agriculture as a transformative force that could improve the quality of life in several ways has been diminished by conventionalization. Whether the multiple-paths model represented by New Zealand can avoid the agro-industrialization of the California experience is yet to be seen. The evidence from Great Britain on the

growing supermarket domination and the ensuing cost-price squeeze supports the California position. Our research provides mixed support for the conventionalization thesis. Contrary to the research by Lockie and Halpin (2005) in Australia, it does show a significant divide between the types of producers, in our case certified and non-certified, regarding size of operation, kinds of market participation, economic motivation, and views on the necessity of organic certification for small-scale producers. We echo the suggestions of other researchers that more studies are needed that capture the nuances of the institutionalization of organics in different countries and regions.

Conventionalization was facilitated by the adoption of national level organic standards. Concerns over the negative impacts national standards might have on the organic movement overall, and on the economic security of small producers in particular were common (DeLind 2000; Logsdon 1992). This existing system of organic certification that focuses on inputs rather than agronomic and/or social criteria favors agribusiness over small producers (Buck et al. 1997; Klonsky 2000; Vos 2000). As Guthman (1998:151) noted, “organic regulation makes organic agriculture safe for capitalism.” Agribusiness companies with questionable commitment to sustainable practices impose an “organic lite” model on all producers through intensification of production and the farm-gate cost-price squeeze. As supermarkets source their product globally, these pressures to compete on low cost will increase and larger firms with economics of scale will more likely survive. There is no long-term security for any organic producers in this system (DeLind 2000).

Even with conventionalization, organics do improve environmental quality compared with industrial models. Organics are good for the environment and for the people – the producers, farm workers, and consumers. Most can agree that food grown with fewer chemicals is a necessary “step in the right direction” (DeLind 2000:203). That being said though, the trends toward indirect markets and global organic commodity chains increase the food miles and “distancing” in organics (Kneen 1997). With distancing into indirect markets, the corporate profit motive replaces the focus on healthy rural communities and food systems. Furthermore, the certified organic label absolves the customer of any further thinking regarding the structure and externalities of the agro-food system, such as farm worker rights, family-based agriculture, and low-income consumers (DeLind 2000). The national standards do not address these deeper societal issues.

Mainstream processors and retailers increased activity in organics blurs the distinction between organic and conventional food products (Klonsky 2000).

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Although organics was originally a way to move some power in the commodity chain back upstream toward the producers, with conventionalization the power is moving back downstream toward the processors and retailers (Wilkinson 2002). As a result, organics loses its potential as a mechanism to revive community in face of agro-industrialization. As DeLind (2000) notes this “slightly greener” version of agriculture has little concern for the quality of life of producers and their communities.

Two approaches that do take into consideration the quality of life of producers and their communities are “foodsheds” (Kloppenburger, Hendrickson, and Stevenson 1996) and “Civic Agriculture” (Lyson 2004; Lyson and Guphill 2004). Foodshed analysis employs the “watershed” analogy to describe the link between the flow of food production and consumption with a purpose of building local and sustainable food-systems. It encourages us to eat within our foodshed as much as possible to reduce the negative externalities of agri-food activities, as well as build community. “Civic Agriculture” is the “embedding of local agricultural and food production in the community” (Lyson 2004:62). Farmers’ markets, small-scale food processors, community and school gardens, community supported agriculture (CSA) and organic farmers are elements of the “relocalization” of civic agriculture. Supporters of civic agriculture argue that it has the potential to rebuild community in the face of the globalization of the agro-food system. According to Lyson (2004), civic agriculture is the logical extension of sustainable agriculture, as it re-grounds the food system within community.

While the conventionalization of organic agriculture might indeed dampen its transformative capabilities, the growing focus on local food systems provides venues for the lifestyle producers to participate in direct markets. It should not be surprising that many of these producers will choose to operate on the “trust system” rather than embrace organic certification. Through local food systems and civic agriculture, organic producers and consumers can work together to improve the quality of their lives.

References

- Allen, P. and M. Kovack. 2000. “The Capitalist Composition of Organic: The Potential of Markets in Fulfilling the Promise of Organic Agriculture.” *Agriculture and Human Values* (17):221-32.
- Belasco, W. 1989. *Appetite for Change*. New York: Pantheon.

- Buck, D.C. Getz, and J. Guthman. 1997. "From Farm to Table: The Organic Vegetable Commodity Chain in Northern California." *Sociologia Ruralis* 37(1):3-20.
- Buttel, F.H. 1992. "Environmentalization: Origins, Processes, and Implications for Rural Social Change." *Rural Sociology* 57(1):1-27.
- Buttel, F.H. and H. Newby. 1980. *The Rural Sociology of Advanced Societies: Critical Perspectives*. Montclair, NJ: Allanheld, Osmun
- Campbell, H. and B. Coombes. 1999. "Green Protectionism and Organic Food Exporting from New Zealand: Crisis Experiments in the Breakdown of Fordist Trade and Agricultural Policies." *Rural Sociology* 64(2):302-19.
- Campbell, H. and R. Liepins. 2001. "Naming Organics: Understanding Organic Standards in New Zealand as a Discursive Field." *Sociologia Ruralis* 41(1):21-39.
- Clunies-Ross, T. 1990. "Organic Food: Swimming Against the Tide.?" Pp. 200-14 in *Political, Social, and Economic Perspectives on the International Food System* edited by T. Marsden and J. Little., Aldershot, UK: Avebury Press.
- Clunies-Ross, T. and G. Cox. 1994. "Challenging the Productivist Paradigm: Organic Farming and the Politics of Agricultural Change." Pp. 53-74 in *Regulating Agriculture* edited by P. Lowe, T. Marsden, and S. Whatmore. London: David Fulton Publishers.
- Coombes, B. and H. Campbell. 1998. "Dependent Reproduction of Alternative Modes of Agriculture: Organic Farming in New Zealand." *Sociologia Ruralis* 38(2):127-45.
- DataMonitor. 2007. *Organic Food in the United States*. Retrieved March 22, 2008 (<http://www.marketresearch.com/product/display.asp?productid=1683231&SID=93136776-411012680-502442432>).
- DeLind, L.B. 2000. "Transforming Organic Agriculture into Industrial Organic Products: Reconsidering the National Organic Standards." *Human Organization* 59(2):198-208.
- Friedmann, H. 1993. "After Midas's Feast: Alternative Food Regimes for the Future." Pp. 213-33 in *Food for the Future: Conditions and Contradictions of Sustainability* edited by P. Allen. New York: John Wiley and Sons.
- Goodman, D. 1999. "Agro-food Studies in the 'Age of Ecology': Nature, Corporeality, Bio-Politics." *Sociological Ruralis* 39(1):18-38.
- _____. 2000. "Organic and Conventional Agriculture: Materializing Discourse and Agro-Ecological Managerialism." *Agriculture and Human Values* 17:215-19.
- Goodman, D., B. Sorj, and J. Wilkinson. 1987. *From Farming to Biotechnology*. Oxford: Blackwell.

CONVENTIONALIZATION, BIFURCATION, AND QUALITY OF LIFE 233

- Guthman, J. 1998. "Regulating Meaning, Appropriating Nature: The Codification of California Organic Agriculture." *Antipode* 30(2):135-54.
- _____. 2000. "Raising Organic: An Agro-Ecological Assessment of Grower Practices in California." *Agriculture and Human Values* 17:257-66.
- _____. 2004a. "Back to the Land: The Paradox of Organic Food Standards." *Environment and Planning A* 36:511-28.
- _____. 2004b. "The Trouble with 'Organic Lite': A Rejoinder to the 'Conventionalization' Debate." *Sociologia Ruralis* 44(3):301-16.
- _____. 2004c. *Agrarian Dreams: The Paradox of Organic Farming in California*. Berkeley, CA: University of California Press.
- Hall, A. and V. Mogyorodó. 2001. "Organic Farms in Ontario: An Examination of the Conventionalization Argument." *Sociologia Ruralis* 41(4):399-422.
- Howard, P. 2005. *Organic Industry Structure: June 2005*. Center for Agro-Ecology and Sustainable Food Systems. Santa Cruz, CA: University of California.
- Kaltoft, P. 2001. "Organic farming in late modernity: At the frontier of modernity or opposing modernity." *Sociologia Ruralis* 41(1):146-58.
- Klintman, M. and M. Bostrom. 2004. "Framings of Science and Ideology: Organic Food Labeling in the US and Sweden." *Environmental Politics* 13(3):612-34.
- Klonsky, K.. 2000. "Forces impacting the production of organic foods." *Agriculture and Human Values* (17):233-43.
- Kloppenborg, J., J. Hendrickson, and G.W. Stevenson 1996. "Coming in to the Foodshed." Pp. 113-23 in *Rooted in the Land: Essays on Community and Place* edited by W. Vitek and W. Jackson. New Haven, CT: Yale University Press.
- Kneen, B.1997. "Going Organic." *The Ram's Horn*. 153:1-3.
- Lampkin, N. 1990. *Organic Farming*. Ipswich: Framing Press.
- Lockie, S. and D. Halpin. 2005. "The 'Conventionalization' Thesis Reconsidered: Structural and Ideological Transformation of Australian Organic Agriculture." *Sociologia Ruralis* 45(4):284-307.
- Lockie, S., K. Lyons and G. Lawrence. 2000. "Constructing 'green' foods: Corporate capital, risk and organic farming in Australia and New Zealand." *Agriculture and Human Values* 17:315-22.
- Logsdon, G.. 1992. "Organic Overload." *Farmer to Farmer*. 8:9-11.
- Lynggard, K. 2001. "The farmer within an institutional environment: Comparing Danish and Belgian organic farming." *Sociologia Ruralis* 41(1):411-27.
- Lyons, K. 1997. "What shade the greenwash? Corporate environmental commitment to organic agriculture or constructing a green facade." Paper

- presented at the Environmental Justice: Global Ethics for the Twenty First Century conference. Victoria: Melbourne University.
- _____. 1999. "Corporate environmentalism and the development of Australian organic agriculture: The case of Uncle Tobys." *Rural Sociology* 64(2):251-65.
- Lyson, T. 2004. *Civic Agriculture: Reconnecting Farm, Food, and Community*. Medford, MA: Tufts University Press.
- Lyson, T. and A. Guptill. 2004. "Commodity Agriculture, Civic Agriculture and the Future of U.S. Farming." *Rural Sociology* 69(3):370-85.
- MacRae, R. J., J. Henning and S.B. Hill. 1993. "Strategies to Overcome Barriers to the Development of Sustainable Agriculture in Canada: The Role of Agribusiness." *Journal of Agricultural Ethics* (1):21-51.
- Mann, S.A. 1990. *Agrarian Capitalism in Theory and Practice*. Chapel Hill, NC: University of North Carolina Press.
- Michelsen, J. 2001. "Recent Development and Political Acceptance of Organic Farming in Europe." *Sociologia Ruralis* 41(4):3-20.
- OTA (Organic Trade Association). 2006. Manufacturer Survey. Retrieved on November 6, 2007 (<http://www.ota.com/pics/documents/short%20overview%20MMS.pdf>).
- Pollen, M. 2001. "Behind the Organic-Industrial Complex." Retrieved on April 7, 2007. (<http://www.wesjones.com/pollan2.htm>).
- Pugliese, P. 2001. "Organic Farming and Sustainable Rural Development: A Multifaceted and Promising Convergence." *Sociologia Ruralis* 41(1):112-30.
- Rosset, P.M. and M.A. Altieri. 1997. "Agroecology Versus Input Substitution: A Fundamental Contradiction of Sustainable Agriculture." *Society & Natural Resources* 10(3):283-95.
- Smith, E. and T. Marsden. 2004. "Exploring the 'Limits to Growth' in UK Organics: Beyond the Statistical Image." *Journal of Rural Studies* 20(3):345-57.
- Tovey, H. 1997. "Food, Environmentalism and Rural Sociology: On the Organic Farming Movement in Ireland." *Sociologia Ruralis* 37(1):21-37.
- USDA/ERS (2007). Organic Production: Data Sets. Overview. Retrieved on April 6, 2007 (<http://www.ers.usda.gov/Data/Organic>).
- Vos, T. 2000. "Visions of the Middle Landscape: Organic Farming and the Politics of Nature." *Agriculture and Human Values* 17:245-56.
- Wilkinson, J. 2002. "Genetically Modified Organisms, Organics and the Contested Construction of Demand in the Agro-Food System." *International Journal of the Sociology of Agriculture and Food* 10(2):3-10.