Final Report: The Persistence of Florida's Small Organic Farms

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Project Summary

With the expanding demand for organically grown produce, opportunities for both small-scale and industrial farms continue to emerge and grow. Consumers of organic products are found in every market outlet, both conventional and alternative (natural food stores, farmer's markets, subscription boxes). Florida follows only California and Arizona as a top producer of organic fresh fruits and vegetables and holds an advantage as the only major producer east of the Mississippi on the national fresh produce chain. In addition to the locational advantage that Florida producers possess, they also enjoy a growing season that overlaps with what is largely a limited fresh produce market in other parts of the country. This situation can create both security for small farms, but also can provide the conditions in which the organic market becomes industrialized to meet growing demand. This study uses a multi-method approach including semi-structured interviews, rapid market chain analysis, and geospatial analysis to explore two main research objectives: 1) Identify and analyze the most important market conditions that enable small-scale organic farms in Florida to persist in their current livelihood, 2) Identify and analyze market conditions in which the organic market may become industrialized. The two most important threats to farm persistence were increasing costs of organic inputs and interstate and international competition. The most important factors contributing to farm persistence were increasing consumer demand for organic products and price premiums. Of those small farms that were found to be highly successful, the formation of a social-business contract was the most important contribution to their success. Farms that adopted industrial methods of production and marketing such as input substitution and vertical market chain integration struggled the most.

Introduction

The development of industrial agriculture over the history of the United States has led to many different debates, issues, and problems for small farms nationwide. Between Thomas Jefferson's agrarian vision of a small-holder agricultural landscape (Griswold, 1946) and today's modern agro-industrial food networks, the market space for small farmers has shrunk significantly. Growing barriers to traditional markets, price indices, technology, and research leave small farmers even further from the cusp of economic and social survival (Hazell, Poulton and Wiggins, 2007). Industrial agriculture also contributes to the degradation of our water and soil resources through intensive chemical pest management (FAO, 2002). This combination of social, economical and environmental threats posed by industrial agriculture led to an agricultural reinvention, with one solution recognized today as "organic" production (Baker, 2002).

Organic farming has evolved from a grassroots movement of a few "hippie" farmers in California to a multi-billion dollar, international food network backed by government certification standards (Guthman, 2004). Although still considered to be in its youth, the organic retail market has grown by 16-20% every year since 1990 (Dimitri and Greene, 2002) and shows no real sign of slowing. Initially, organic farming seemed to be a perfect solution to the industrial agriculture problem: price premiums that provided income and opportunity to small family farms, reduction of harsh and dangerous agrochemicals, and maintenance of the rural economy (Allen and Kovach, 2000; FAO, 2002). However, as the market grows, the same pattern of large-scale economies and agribusiness consolidation that occurred in conventional agriculture is now occurring in organic agriculture (Goodman, 2000).

While a growing market is mostly a positive trend for small farmers, it is also a threat, as more organic agriculture is being sold through mainstream outlets and global distribution food networks (Dimitri and Greene, 2002). To meet the supply that these venues require, farms must become bigger and adhere to conventionalized packing and safety standards; standards which are next to impossible for small farmers to economically match (Raynolds, 2004; Weiss, 1999). This is an urgent matter, as small farms are some of the most important players in rural economies. Ashley and Maxwell (2001) contend rural populations are in a state of poverty, neglect, and overall lack appropriate funding to maintain livelihoods. The poverty problem is often the reason small farms go under; a working farm requires at least one person dedicated full-time (Hazell, Poulton and Wiggins, 2007). Most farming families cannot forego even one wage-earning member. While Brookfield (2008) claims that small family farms are not struggling as much as suggested, and are in fact successfully competing against corporate farms, the question of how they continue to do so is at the forefront of community development policy.

Objectives

Small farms are a traditional part of the rural landscape, and organic agriculture is one method in which they have regained their standing in the agricultural community. However, as the organic market continues to grow at double-digit rates, it is essential to ask how that same growth may affect the livelihoods of small organic farmers. As the organic market grows, it has taken on qualities of conventional agriculture (Guthman, 1998) that often fail to include the small farmer as viable part of the future of organic agriculture. This study addresses the difficulties small farmers will face as the organic market expands and attracts larger agribusiness firms.

The research questions guiding this study are:

1. What are the most important market factors contributing to the persistence of Florida's small organic farms in a growing organic marketplace?

2. What indicators of organic industrialization are present in Florida's organic marketplace?

3. What are some of the characteristics that explain the success or lack of success of small farms? ***Added objective as project unfolded.*

I added Objective 3 because as I interviewed more farmers, it became apparent that some were highly successful and others struggled to stay afloat. I already had designed my interview questions to get a profile of each farm, and some of these characteristics (variables) made a difference in success. So I compared each farm's success score to various characteristics to see if there was a pattern.

Methods

This study was executed in three phases: Collection and Analysis of Organic Market Data, Farmer Interviews, and Market-Chain Analysis.

Collection and Analysis of Organic Market Data

Because the organic market is growing at a 16-20% annual rate, there are numerous sources of reliable industry data and reports from which to derive an overall idea of the organic market for all types of growers. First and foremost, the USDA's Economic Research Service makes comprehensive organic production datasets available on its website. They can be compared to conventional wholesale and farmgate prices for the same product in major markets (i.e. Boston, New York, San Francisco) (Economic Research Service, 2008). The Organic Trade Association (OTA) was also a reliable and comprehensive source for current market research and organic industry reports (Organic Trade Association, 2008). This information was used to relate the most important success factors identified in the farmer interviews to the current organic industry in Florida.

Farmer Interviews

There are 75 certified organic fruit and vegetable growers currently farming in Florida. Two main reasons for population inclusion in the study were: participation in the organic market and non-niche crop production. After sorting farmers based on market participation and crop production, 32 growers were interviewed. Figure 1 shows the research sites and study regions. Most interviews took place in-person either on the farm or in the farmer's business office. The interview was semi-structured, with questions broken into four sections: Farm Profile, Market Chain Description, Market Risks/Factors, and Attitudes about Organic Farming. Questions in the Farm Profile were close-ended, while the questions in the remaining sections were mostly open-ended.

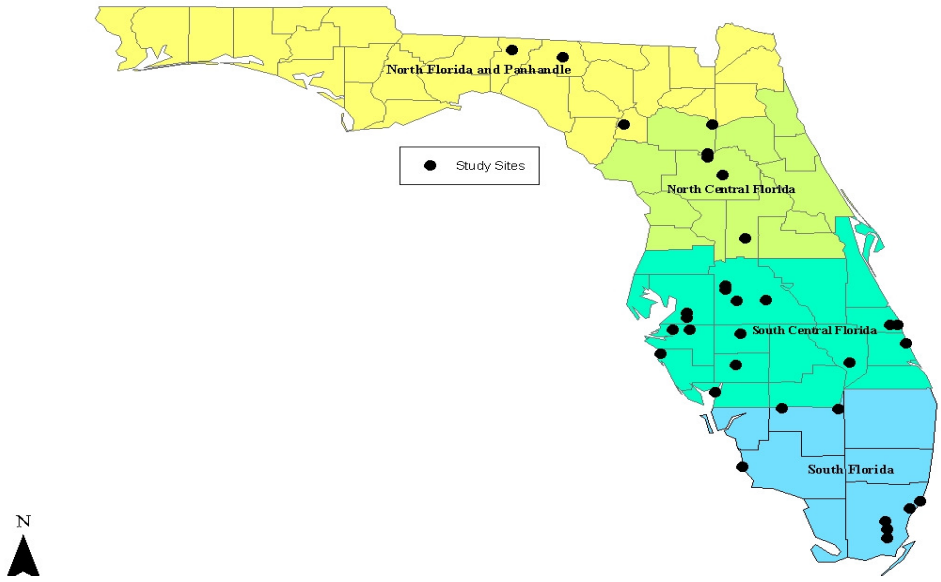

Figure 1. Study regions and study sites.

The 'success score' was comprised of economic and social indicators. The farmers were asked to rate from one to five their perceived level of success with each indicator, after which they were asked to rate their overall success, based on the indicators and other factors not included in the success index. The rating system was as follows: 1-very unsuccessful, 2-somewhat unsuccessful, 3-neither successful nor unsuccessful, 4-somewhat successful, and 5-very successful. These indicator ratings were averaged to produce an overall success score for each farmer; this score acts as the dependent variable on which other data was analyzed.

Market Chain Analysis

The organic market players in Florida consist for the most part of harvesters, packers, processors, marketers, distributors, retailers, and end customers. Each point in the chain is made of market players who must be certified by a USDA-accredited certifying agency to buy, process, or resell organic produce (Ferris, et al., 2006; Quality Certification Services, 2008). I determined the population through the local certification agency, business records and internet searches. Taken together, these three sources yielded approximately 50 market players.

The sampling design for this portion of the study was modeled after Ferris and other's. (2006) "Rapid Market Analysis" methodology. The objectives of this methodology are: To gain a view of how a commodity sub-sector is arranged, operated and performed, identify sub-sector constraints and opportunities, and identify specific market chains that are most suitable for a producer group. The data were gathered through semi-structured informal interviews with a minimum of 3-5 actors at each stage of the market chain. At least one market chain analysis was performed for a market traditionally dominated by large-scale producers, and another was performed on a market traditionally available to small-scale producers.

Results

Thirty-two households were interviewed and general data were collected about the farm characteristics. The total amount of acreage in certified organic production was 4,941.6 acres, of which 82% was owned by the farmer, and another 18% was leased or rented. Most farmers planned to maintain their current acreage in the near future, although two larger farms planned on pulling in an extra 200-400 acres via contract farming (where independent farmer grows and sells to another farmer). The farmers had 734 years of combined experience in farming in general, but only 270 years as certified organic. Table 1 compares large and small farms in several areas.

Table 1. Comparison of farm characteristics for small and large farms

Farm profile characteristics	Small farm N=25 (sales < $250,000)	Large farm N=7 (sales >$250,000)
Average certified acreage	12.9	669.9
Average time farming (years)	21.9	26.6
Average time certified organic (years)	8.8	12.8
Min/max time farming (years)	3/55	5/43
Min/max time farming certified organic (years)	1.5/28	2/14
Direct Retail/Wholesale Sales (Percent)	52/48	0/100
Average Success Score (1- Very Unsuccessful—5 Very Successful)	3.6	4.1

Success Scores and Farm Characteristics

Of the 32 farmers interviewed, 30 responded to the success index questions. Thus, only 30 success scores were used to determine the overall success average. The average success score was 3.7 or roughly between neutral (neither successful nor unsuccessful) and somewhat successful. The farm reporting the lowest success score of 1.4 (between very unsuccessful and somewhat unsuccessful) was a struggling citrus grower with 32 acres. There were two farms reporting the maximum score of 5 (very successful), which interestingly were on the polar extremes of size and marketing strategy. The first farmer reporting a success score of 5 had 1000 acres in production, with 100 percent of their product going to wholesale outlets, while the other farmer reporting a success score of 5 had five acres in production, with the entirety of his produce going to a direct-retail outlet. The median and mode success scores were 4.1 (somewhat successful) and 3 (neither successful nor unsuccessful), respectively.

Figure 2 shows when compared to farm size (in acreage), there is a distinct pattern such that farms over 300 acres showed a low variability in success scores, with the majority clustering between scores 4 and 5. Although farms with 10 or less acres in production showed high variability in success rates, the majority were around 3 (neither successful nor unsuccessful) and higher. A third group with acreage between 10 and 500 acres reported success rates of 3 and lower.

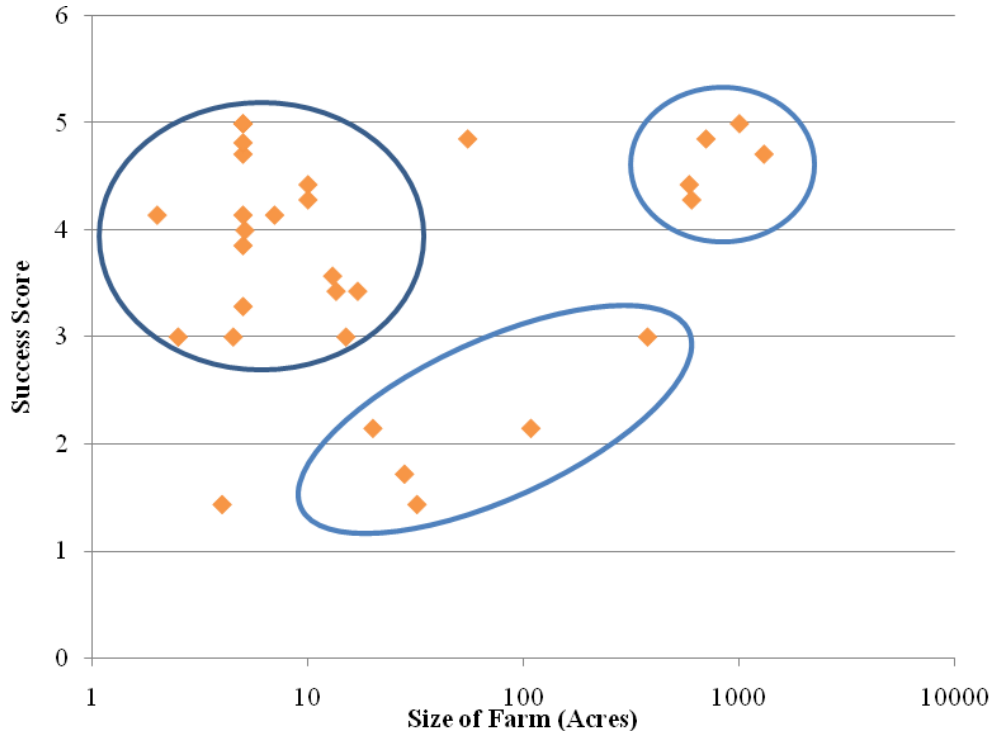

Figure 2. Comparison of farm size and success score.

Figure 3. Average success scores for wholesale and direct-retail market strategies.

Success scores were also compared to market strategy (wholesale vs. direct retail). Figure 3 shows how many farmers used each strategy and the average success score for each group. Finally, when success score was compared to the reason why the grower was certified organic, the difference between "lifestyle" farmers (farmers who use organic production regardless of certification status) and "business decision" farmers (those who chose certification to access the organic market) was large. Figure 4 shows the average success scores for the two groups.

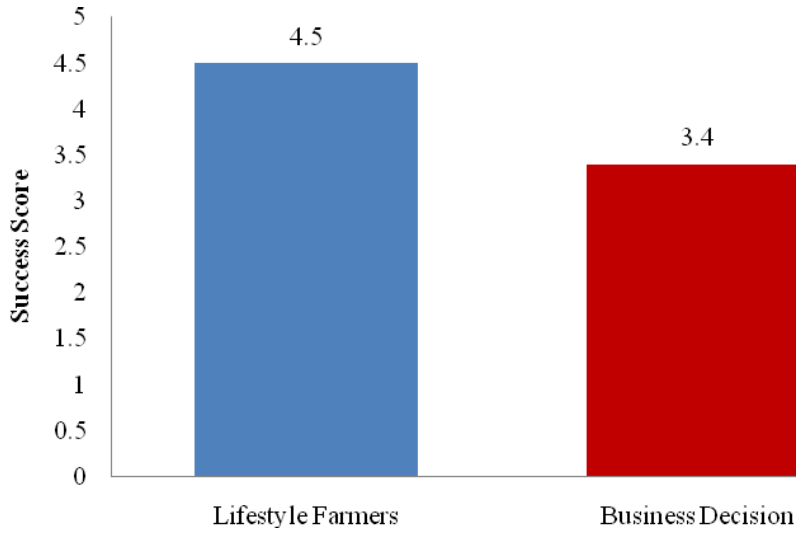

Figure 4. Average success scores and reason for certification.

External Market Factors: Risks and Securities

Table 2 shows the most important risks and contributions to farm persistence.

Table 2. Risks and contributions to farm persistence.

Market factor	Number farms	Percentage
Threats		
Off-farm inputs	11	36
Competition	6	20
Certification regulations	5	16
Other	8	28
Securities		
Consumer preferences	13	42
Premiums	7	23
Market access	4	13
Other	6	22

Market Chain Analysis

Table 3. Results of market chain analysis.

Type of buyer	Buy from	Buy from location	Buy from size
Packer	Growers	East Coast, SE region	Mid-large
Packer	Growers	CA, FL, Mexico	Large
Processor	Growers, brokers, distributors	FL, CA, GA, SE region	Small-large
Processor	Growers	No data	Mid-large
Processor	Grower	FL	Small-large
Processor	Distributors	Florida	No data
Broker	Growers	CO, CA, WA	Small-large
Shipper	Growers	Fl, CA, International	Small-large
Distributor	Broker	No data	No data
Distributor	Grower	Florida	Large
Distributor	Broker	FL, NY	No data
Distributor	Growers	FL	Small-large
Restaurant	Distributors	No data	No data
Restaurant	Distributor	FL	Large
Restaurant	Growers	Central FL	Small
Retailer	Distributors	Florida	Large
Retailer	Distributors	Fl, CA, Mexico	Large
Retailer	Distributors	CA, FL	Large
Retailer	Growers	FL	Mid
Retailer	Distributors, growers	CA, FL, Mexico	Large, local

Of the buyers that bought from growers directly, the majority bought produce from large-scale operations. They also claimed to prefer to buy from large-scale producers as opposed to small-scale, citing logistical issues as the main reason. The produce bought by the buyers came from all over the U.S. and abroad, especially from Mexico. Although most of the buyers bought Florida produce, they also bought produce from other major organic growing states like California. After acquiring the produce, it is distributed mostly throughout Florida and the east coast. The price mark-up for the organic produce ranged between 6 and 60%.

Discussion

Characteristics of Successful Farms

There is not one sure-fire formula for success in organic farming. The successful farms participating in this study, however, share several characteristics. Regardless of the amount of acres in production or the time farming as certified organic, farmers with high levels of success each had a dominant share of their market. This was accomplished through consistently

providing quality product in a timely manner. Through time, the level of interaction between farmer and buyer grew to be based on a social as well as a business contract. One farmer with a high success score claimed that her customers had been buying her product for over twenty years, and all decisions on what product she should grow for them was at her discretion. The customer trusted the farmer to make production decisions based on their long-standing relationship. This social relationship develops slowly and requires a significant amount of give and take on the part of the farmer to supply needed product and quality, and the buyer to continuously pay a fair price. The buyer also has to maintain trust by honoring the agreed upon quantity and price at the time of transaction. As exemplified by several formerly successful farms, this type of social relationship becomes more difficult to grow and sustain as the grower puts more acreage in production; the grower and buyer often are at odds of how much one can supply and the other can demand. For example, one interviewed grower with five acres increased his production to ten acres and his regular customer could no longer handle the supply. Thus, the successful farmer scouts the market prior to changing or increasing production; otherwise the social relationship he spent time developing is threatened by misunderstanding or failure to act.

Another common characteristic of successful farms is the ability to monitor and control costs, especially with off-farm inputs. The cost-sales balance has been precarious for most of the interviewed farmers; one year costs were low, while the next year they sky-rocketed, making it difficult to break even that year. However, as the successful farmers noted, one of the benefits of organic farming is the potential independence from considerable amounts of off-farm inputs; not only can one produce compost on-farm, but the organic regulations and philosophy encourages one to do so. This is where successful farms stand out—they first rely on farm-generated inputs, and then defer to off-farm inputs. However, it should be noted that several successful farms citing this strategy also claimed that regardless of significant cost-cutting, they were still very concerned about competition and lower prices undercutting their bottom line. This indicates that off-farm input costs are and will be a significant factor for organic farms Florida-wide.

Characteristics of Struggling Farms

One of the most prominent characteristics of struggling farms in this study was the inability to access the organic market at an adequate level. Even if a farm had solid access to one market outlet for one year, the next year this same outlet could become unreliable. These farms had very little market diversification; they relied on one or two major outlets to sell their product. When these outlets were unable to purchase the farmer's product, the farmer was forced to either lose their crop that year, or sell it at conventional prices. Because the majority of struggling farms in this study were small scale, they were generally unable to access a variety of market outlets such as distributors, processors, or even direct-retail outlets. One farmer in particular noted how difficult it was to enter the organic market at all without name recognition within the sector. Another difficulty that over half of the struggling farms experienced was competition

from other small farms claiming their product to be certified "naturally grown" or "grown organically", which according to the farmers in this study are labels that mislead the public and make "certified organic" seem less valuable or reliable. Overall, these farms faced stiff competition from both wholesale and direct-retail competitors, thus greatly inhibiting their entrance or continued presence in the organic market.

The final characteristic common to struggling farms is the dominant reliance on input-substitution methods and the subsequent vulnerability to fluctuations in price and availability of such inputs. Although most farms use some amount of off-farm inputs, this group of farms cited the cost of fertilizers and fuel to be "crippling" to their overall financial situation. Initially, the majority of these farms entered the organic market for the price premium on organic produce; the perceived 'niche' opportunity seemed to outweigh the increased costs of input-substitution production. This method of production may be influenced by the fact that these farms were long-term conventional farmers recently switched to certified organic. According to the National Organic Standards Board (NOSB) definition, "organic agriculture is an ecological production management system that promotes and enhances biodiversity, biological cycles and soil biological activity. It is based on minimal use of off-farm inputs and on management practices that restore, maintain and enhance ecological harmony'' (Agricultural Marketing Service, 2008). Farmers who were accustomed to conventional production methods such as using large amounts of off-farm inputs to control pests and increase quality face an immediate difficulty in farming organically; they either have to accept an initial loss of yield and quality to the trial and error process inherent to organic farming as defined by the NOSB, or they have to pay increasing costs for approved manufactured inputs that replace their conventional counterparts. Taken as a whole, relying on an input-substitution approach to organic farming is a major contributing factor to farmers' low success rate. Table 4 summarizes the characteristics of successful and struggling farms.

Table 4. Characteristics of successful and struggling farms.

Characteristic	Successful Farms	Struggling Farms
Business strategy	Relies on 'social contract'	Has no 'social contract'
Off-farm inputs	Controls cost by minimizing use	Uses inputs regularly
Access to market	Diversifies sales outlets	Relies on one or two outlets
Years farming organic vs. conventional	More time organic	More time conventional
Type of crop	'High end edibles'	Mono crops (i.e. citrus)
Size of farm (acres)	<5 acres or >100 acres	Between 10 and 100 acres
Principle market strategy	Direct-retail	Wholesale

Evidence of Organic Industrialization in Florida

According to several studies (DeLind, 2000; Guthman, 1998; Guthman, 2004) evidence of organic industrialization falls into four major categories: concentrated corporate ownership, capital- and technology-intensive production methods, vertically integrated distribution

networks, and implementation of formula standards. This study has found evidence of the first three categories through organic farm interviews and a rapid market chain analysis.

Concentrated Corporate Ownership

Corporate concentration of organic products and brands is widespread and ranges from fresh fruits and vegetables to processed drinks, cereals, and convenience foods. While some of the more recent studies conducted in California show a steep increase in corporate ownership among organic producers, organic agribusiness appropriation is still relatively underdeveloped in Florida. Because most organic farms in Florida are small-scale, much of the production is spread out among over 70 producers, and only in certain agricultural sectors is concentrated ownership seen. The citrus sector is experiencing the greatest concentration of ownership in both organic and conventional citrus, with only a few processors buying the majority of production throughout Florida. Several citrus growers mentioned the narrowing market, especially for fresh juice processing. The main problem for organic citrus growers was the rapid consolidation of packing and processing plants throughout Florida; this consolidation ultimately led to a small window of opportunity to get their product harvested, shipped, packed and processed as organic.

There was also extensive indication of corporate concentration among the distribution channels in Florida. Among all the farmers interviewed, only five were participating in an arrangement similar to a grower cooperative. The majority of distributors had growers with whom they regularly did business; some growers were actually contracted to grow for these distributors. Once the distributors acquired the raw product, it was resold to various processors and packers around the country and internationally. By the time the final product reached the end consumer, the price had increased from 10-60%.

Capital- and Technology-Intensive Production Methods

As discussed earlier, one of the most common characteristics across farms was the reliance on input-substitution production methods. This was especially evident in large-scale farms, but was also relatively common among small producers as well. Because the cost of fertilizers and pesticides was cited as the most imminent threat to a farm's success, it is apparent that these technologies are becoming more prevalent and important to maintaining organic production overall in Florida. While the original intent of organic production was to approach farming from a whole-systems strategy that minimized off-farm inputs (Agricultural Marketing Service, 2008), the increasing ease of purchasing already-approved organic products quickly replaced the difficult and time consuming process of trial-and-error production that adheres more closely to the original intent. Most farmers interviewed stated that they would like to have even more manufactured choices for controlling insects and weeds than current supply. It was very rare for a farmer--regardless of the size of operation--to employ beneficial predatory insects or cover crops for weed reduction. Interestingly, one farmer claimed that it was actually the National Organic Program standards themselves that created the situation in which farmers relied more on manufactured inputs. He argued that the standards were so rigid that they left no room for experimentation on the farm because the farmer could risk the chance of losing his

certification. Instead of finding ways to be more sustainable on the organic farm, it was easier for him to forego the risk and stick to the outlined allowable products.

In addition to off-farm inputs, large scale farms were also employing high-technology solutions to drainage and water distribution problems inherent to vast amounts of land. One farmer employed laser-leveling tractor implements to ensure the soil had proper drainage for the desired crop. Technology such as this greatly improves production by minimizing loss of irrigation resources and crop rot. Not only is this technology too costly for most small farmers as it requires large quantities of capital input, neither is it practical on small tracts of land. It would take large-scale production to see the benefits of such a capital investment. One small farmer in this study had adjusted his technology needs by employing various factory-line packing machines, such as cullers and quality control belts. Although this type of technology is not considered cutting-edge, it does allow for the small farmer to ensure better quality and safety control, which makes him more competitive in the wholesale market.

Vertically Integrated Distribution Networks

While only a few farms were involved in both production and distribution, vertical integration became much more apparent through the rapid market analysis. Several distributors and processors had entire production and distribution networks working under the same company ownership. These companies control every aspect of the business from crop type to end-user delivery. This allows for them to carefully monitor and take advantage of the supply and demand equation on the organic market, while at the same time avoid profit loss to outside intermediaries. They are also able to take advantage of economies of scale through ensuring the needed resources to supply a timely and quality product all over the United States. Vertical integration is especially beneficial in the current market because of the recent food-related illnesses that led to public questioning of untraceable food products. Since one company can provide records of the time, place, and method of production, they have a competitive edge against other intermediaries that procure their product from several other sources besides known growers. Furthermore, the scale of such integration allows for the capital and logistics to ensure food safety from production to retail—something most small farmers are incapable of doing. Neither are the small volume buyers able to guarantee an acceptable level of safety control, since small volumes are repacked to be consolidated into large shipments across regions, thus losing all farm identification.

Beyond the organic market chain in Florida, there is also evidence of vertical integration among several producer/processors. For small farms, vertical integration is also known as "value-adding" because they add another processing step in between production and sales to decrease costs and increase profit. However, as exemplified in other small companies gone mega-scale (i.e. Earthbound Farms), value-adding is often the first step to market consolidation and vertical integration.

Conclusions

This study shows that many of the same problems that are impacting large-scale organic producers are also equally impacting small-scale producers. Rising off-farm input costs and increasing regional and global competition affects price premiums across the board, regardless of the quality and quantity of product one can produce. Thus, small farmers who rely primarily on wholesale market strategies are competing against farms operating with thousands of acres which have many market outlets and benefit from economies of scale. As the market continues to grow and supply meets demand, price premiums are likely to decrease. When this happens, small farmers relying on an input-substitution method of production may be unable to break even, let alone make a living family wage. A situation like this greatly threatens small farm persistence, as it will no longer make financial sense to continue as certified organic or to continue farming in general. Even for farmers who rely primarily on direct-retail outlets, the opportunities for growth in this area seem to be slowing down as well. Competition in farmers' markets and CSA subscriptions is directly related to consumer interest in local foods in general, and not just in organic. Small direct-retail organic producers compete not only with mainstream grocery stores for sales, but also with other small local producers claiming an "organically grown" or "naturally grown" product. As more players enter the market, each producer's share narrows, forcing them to consider other marketing outlets, including wholesale distributors. In combination with rising costs of farming organically and swelling competition from all sides, the small farmer is increasingly at risk for lower success rates, both in the financial and quality of life areas. To stay afloat, many small farmers move to wholesale markets, believing them to be easier in terms of logistics and management. However, as this study shows, wholesale market chains offer little respite from the constant battle to make a living farming as certified organic.

Although small farms make up over 80% of organic producers, only approximately 3% of organic produce is bought nationwide through direct-retail outlets; rather the trend towards wholesale market distribution indicates a major threat to small farm persistence. As the rapid market analysis shows, the majority of intermediaries strongly prefer to do business with large-scale producers and companies, because they can offer logistical efficiency and food-safety assurances. The small farmer usually works on his own or with his family to manage, produce, and market their products. It is energy and capital-intensive to meet the strict standards required to access the wider and more lucrative mainstream organic market. Large operations have the means to dedicate employees full-time to quality control, safety regulations, and shipping and receiving. Thus, small-scale farmers will almost always be at a disadvantage within the wholesale market.

This study suggests that small farmers who wish to make their living from farming organically will need to dedicate significant energy and time to developing a long-term marketing strategy that is based in social relationships. The small farmer does have an advantage in the current market, as many people are increasingly concerned for the health and the safety of their food, global climate change, and sustainability. Consumer concerns should take a large role

in the small farmer's marketing strategy. Small farmers can appeal to consumers' desires for local, fresh, and healthy food more so than large-scale producers. However, a local customer base does not happen overnight; it must be cultivated through providing quality and variety of products on a consistent basis. The small farmer must be ready to respond to changing trends in customer demand; if consumers are more interested in one crop type over the other, than the farmer should be aware of this and adjust accordingly. Overall, a small farmer can exploit the direct-retail market more effectively by being flexible, patient, and most importantly, consistent.

Further Research

This study highlighted several areas where more research would be beneficial to small organic farmers and the organic industry in general. First, the prominent concern about rising input costs and inefficiency of off-farm inputs needs more industry and academic attention. As one farmer noted, there is a deficiency of knowledge on how to farm organically in unique climate areas such as Florida. Farmers are in need of research trials that test different pesticides, varieties, and production methods that are suitable to Florida's crops and growing conditions. A study of the efficacy of manufactured organic inputs would be useful for farmers to determine the best and most cost effective products and management strategies available to them.

This study included a rapid market analysis to get a brief overview of the regional market chain utilized by organic producers in Florida. While this provided some insight into the organic market in Florida, it also uncovered areas where more research is needed. As most intermediaries prefer to deal with large-scale operators, a study examining the decision-making of these intermediaries would be beneficial to organic producers. More research is needed to determine in what ways intermediaries would be more willing or likely to do business with small, local operators before deferring to other regional and international producers. This type of study could also give the industry better insight into how to streamline the distribution process and make it more economically viable for small producers to enter the wholesale market.

Finally, more research is needed in the area of globalizing organic markets and food safety issues. Because organic certification standards are not uniform across the globe, products coming from international companies do not necessarily meet the same expectations as do U.S. products. The possibility for local, regional food distribution to be one solution to the recent food-safety problems is an area of research that is especially urgent, given the prolonged and costly search for tainted products in an international food-network. A component on how to implement incentives for regional distribution among local growers and intermediaries would be helpful for small organic growers.

Addressing these other research areas would provide more information from which organic industry leaders can determine better ways to grow the organic market while still ensuring the integrity and value of the certified organic label. It will also address the needs experienced disproportionately by small organic growers, and create a diversified market where every size and type of producer can thrive and make better decisions contributing to more sustainable livelihoods and healthier rural communities.

Outreach

This study was presented at the American Association of American Geographers 2009 Annual Meeting in Las Vegas, Nevada. It will also be presented to Florida Organic Growers and Quality Certification Services in May 2009. The study is slated for publication within the next year, with the following target journals: *Journal of Sustainable Agriculture, Journal of Rural Studies,* or *Agriculture and Human Values.* Finally, all the participating farmers and Florida Organic Growers will receive a brochure about the most pertinent market conditions relevant to Florida's organic market.

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