RESEARCH REPORT:
An Exploration of the Impact of Farmer-Consumer Interactions on Farmer Growing Practices

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This project was funded by a Southern SARE Sustainable Communities Innovation Grant

TABLE OF CONTENTS

SUMMARY

This report presents the findings from a research project that explores the influence of direct farmer and consumer interactions at farmers markets on the production practices of farmers. The study area of Western North Carolina is located in the Southern Appalachian Mountains and currently has a vibrant local food and farm community. The context for the research is a long standing Local Food Campaign implemented by Appalachian Sustainable Agriculture Project (ASAP) nearly two decades ago to raise awareness of and support for the region's farms, build markets for locally grown food, and provide the people that live in the region a voice in how food is produced. Viewed as a vital means to build meaningful connections between farmers and consumers, the support and promotion of direct market venues has been a key focus of Local Food Campaign activities.

At a high level, the research investigated the question of how localizing markets for farmers influences their production practices. Are farmers producing for local markets using or moving toward practices that are more environmentally sustainable? More specifically, what is the role that farmer-consumer interactions play in changing the way that farmers grow food?

Local food systems have been presumed to be more environmentally sustainable. In much of the food movement literature, farm production in local food systems is said to be more environmentally sustainable than food grown for larger scale and global markets. Little research, however, has looked at how localizing food and farm market relationships impact food production practices. If a goal of the food movement is to build systems of food production and distribution that are environmentally sustainable, there is a need to better understand how the dynamics in localizing food systems, specifically the interactions between farmers and consumers, are shaping and can shape production practices.

Research activities for this project analyzed 10 years of primary farmer production data and studied farmer-customer interactions at farmers markets to look at the kind of interactions farmers and shoppers are having around agricultural practices. How are farmers communicating their growing practices to consumers? What questions are consumers asking? What are their assumptions and concerns about local food and how it is being produced? How is this dialogue influencing the perceptions and actions of farmers and consumers?

Overall the research reveals a dynamic in which consumers are seeking out sustainably grown foods and farmers are supplying it. At farmers markets in Western North Carolina, farmers growing food using sustainable production methods dominate and shoppers shopping at farmers markets are overwhelmingly looking for food grown in sustainable ways. The findings also point to the impact of market experiences on consumers' food purchasing patterns and to the relationship farmers markets have to the ongoing formation of region's food system.

The research also identified gaps in knowledge and communications that can be improved upon at the markets. For farmers, the findings point to the need to clearly communicate growing methods and to view farmers market interactions as a key opportunity to build customer trust and loyalty. The findings also suggest the need to provide consumers with information and guidance

they can use to engage in conversations with farmers about growing methods. Shoppers want to know how food is grown but, as reported by farmers, frequently arrive at market with false understandings or specific expectations about growing methods. This finding suggests a need for additional opportunities at markets for conversation about farmer growing methods and the true costs of small-scale and sustainable farming.

METHODOLOGY

The research for this project was developed within a larger theoretical framework. At the center of this framework is the belief that place-based experiences with food and farms increase people's engagement with the food system. Knowledge and interest gained through experience motivates people to participate in the creation of food systems, and this process of food system "democratization" shapes the values of food system practices.[1]

Informed by this framework, this project focused on farmers markets because they provide opportunities for face to face interaction between farmers and consumers. Farmers markets uniquely provide the opportunity for farmers to communicate with shoppers about their growing practices and for market shoppers to ask farmers about how they are growing food. These types of local food and farm venues facilitate the exchange of information among and between farmers and shoppers, stimulate participants' interest in food and farms, and support the expansion of the region's local food system.[2]

Specific research activities included interviews with farmers, surveys with market shoppers, and an analysis of primary data on farmer production practices. For this study, local farmers and consumers of local food were identified through their participation at area farmers markets. Five farmers markets located in the vicinity of Asheville, NC, the largest commercial center in the region as well as the center of local food movement activity, were selected as research sites. The markets chosen were producer-only, a designation that means that the farmers that sell at those markets are required by market rules to sell only what they grow themselves.

To sample a mix of markets from urban and rural contexts, two markets in Asheville city center, one market in Asheville's Metropolitan Statistical Area (MSA), and two others in more rural environments were selected. Farmers from the markets participated in one structured interview that focused on their production methods, their interactions with shoppers at markets, and the impacts of those interactions on their production practices and communications.

Customer intercept surveys were conducted at all five markets and asked shoppers about their preferences for food grown using certain production methods, their interactions with farmers at markets on the subject of growing practices, and how they would like to see information about farmer growing methods communicated to them at farmers markets.

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[1] Perrett, A., & Jackson, C. (2015). Local food, food democracy, and food hubs. Journal of Agriculture, Food Systems, and Community Development, 6(1), 7–18. http://dx.doi.org/10.5304/jafscd.2015.061.003
[2] Ibid

Additionally, researchers conducted an analysis of data collated from ASAP's *Local Food Guide*, a directory of farms and the food businesses that purchase and sell products from local farms in Western North Carolina and the Southern Appalachians. The *Local Food Guide* is published annually and ASAP has used it to collect data from farmers since 2004 on products they grow and markets they sell to, and since 2008, on production methods they use. Producers listing their farms in the *Guide* have been able to choose from a list of specific practices - animal welfare approved (not a choice until 2013), biodynamic, Certified Naturally Grown™, conventional, free range, GMO-free, humanely raised, integrated pest management, low spray, certified organic, organic (non-certified), pasture raised, permaculture, and wild harvested. For this project, the data for farms located in 23 counties of Western North Carolina were collated and analyzed and used to provide deeper insight and context for local food and farming in the region.

Sample

Structured interviews were conducted with 16 farmers who sell at a total of 12 area farmers markets, including the five markets selected for this study. In total, the farmers in the study represented five counties in the region (three rural and two within the Asheville MSA). Nine farmers were new and beginning farmers (as defined by the USDA as farming for less than 10 years), two farmers were the youngest generation of multi-generational farming families, and five farmers had farmed for more than 10 years. Thirteen of the farmers grew produce, four produced eggs, and two produced meat.

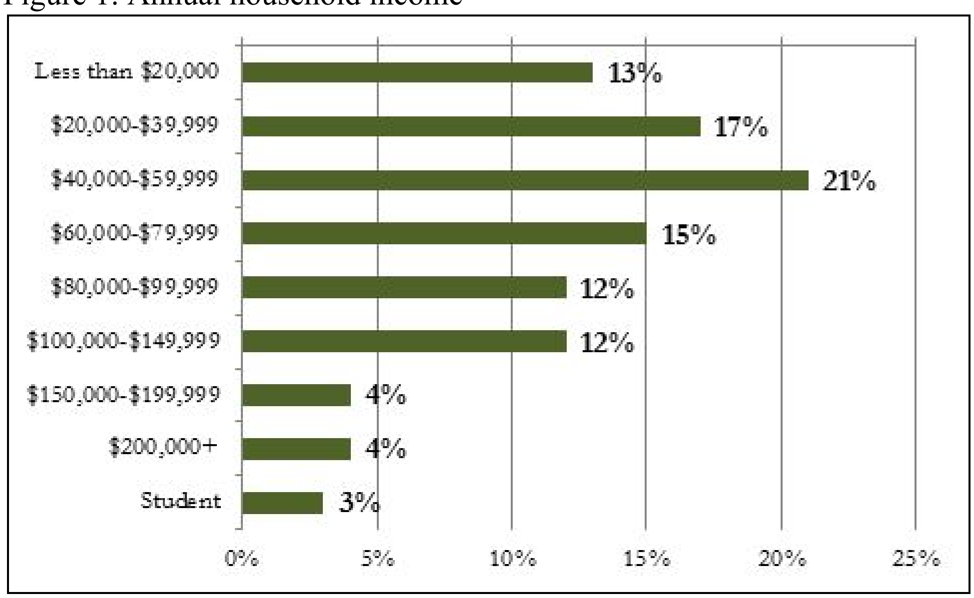
Farmers reported many different production practices and several claimed multiple practices. The distribution of growing practices included 11 growing organically (eight non-certified and three certified), six claimed GMO-free, one used a mix of organic and conventional methods, one followed the Certified Naturally Grown™ certification program, one reported using low spray, three biodynamic methods, and one followed permaculture methods. The distribution of practices in the farmer sample is consistent with the distribution of practices across all producer-only farmers markets in Western North Carolina. An analysis of *Local Food Guide* farmer data show that for farmers that sell exclusively to direct markets (farmers markets, CSAs, and on-farm through u-picks and farm stores) the majority report that they use practices consistent with standard conceptions of sustainable growing methods (Table 1). In 2016, for example, 59% of farmers selling direct used organic practices compared with 6% claiming conventional and 21% low spray.

Table 1. Farming Practices of Farms with Exclusive Sales to Direct Market Outlets

	Number of Farms in 2016	**Percent of Farms in 2016**
Animal Welfare Approved	4	2%
Biodynamic	9	9%
Certified Naturally Grown	6	6%
Conventional	6	6%
Free Range	28	29%
GMO-Free	31	32%
Humanely Raised	28	29%
Integrated Pest Management	28	29%
Low Spray	21	21%
Certified Organic	1	1%
Organic, Non-Certified	57	58%
Pasture Raised	22	22%
Permaculture	18	18%
Wild Harvested	15	15%

Consumer intercept surveys were completed with 237 market shoppers at the five farmers markets in this study. The majority (83%) of respondents indicated they were the primary food shopper in their households. 71% were female and 29% male. The median household income fell into the $40,000 to $59,999 range (this compares to a $44,820 median income for the Asheville MSA in 2014)[3].

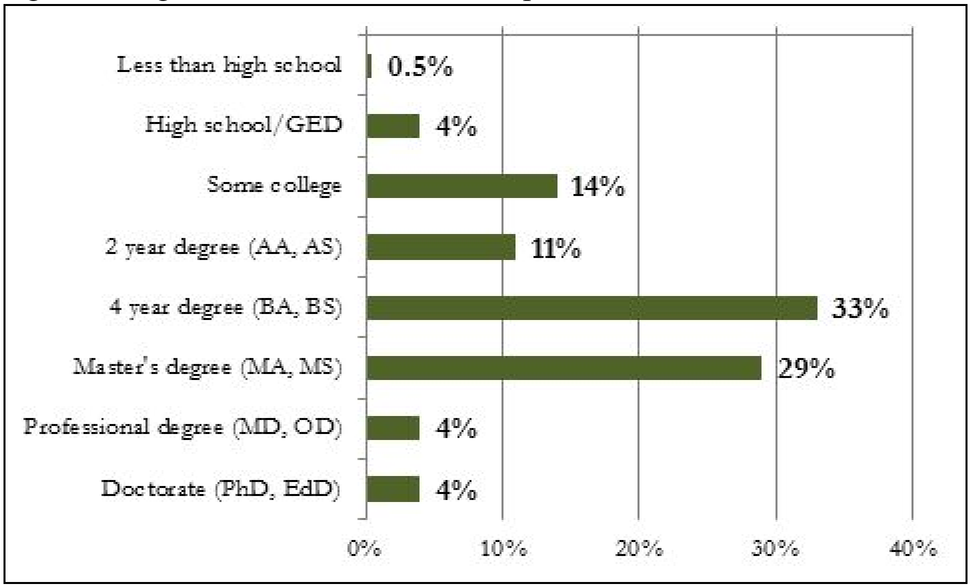
Figure 1: Annual household income



[3] Economic Development Coalition Asheville-Buncombe County (n.d.) Asheville, NC Income. Retreived from: http://www.ashevillechamber.org/economic-development/research-and-reports/income-reports

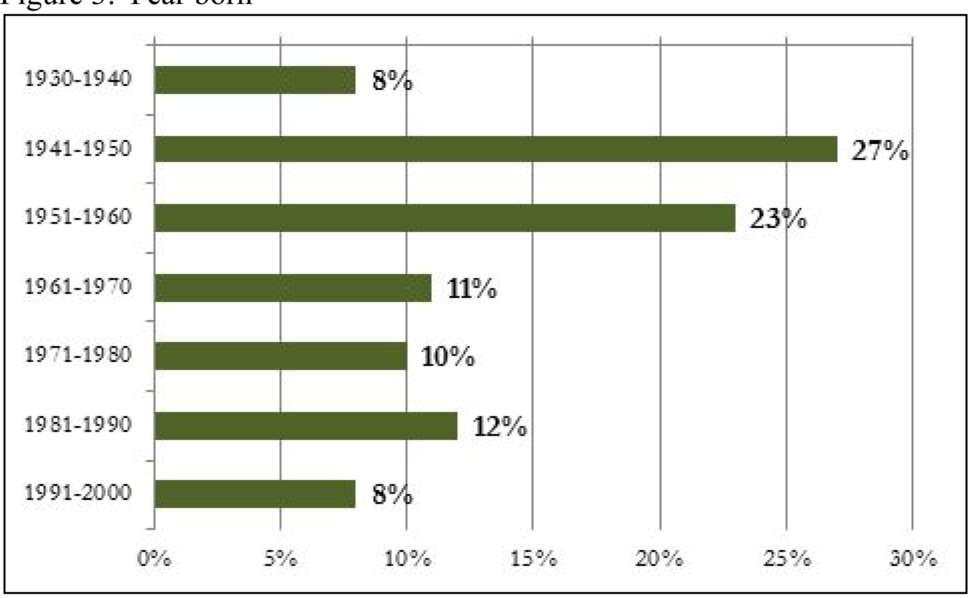
The education level indicated by respondents ranged from less than high school to doctorate and professional degrees. The education categories with the highest representation include 4-year degree (33%) and masters degree (28.6%). There is an even distribution (4.4% each) between high school GED, doctorate, and professional.

Figure 2: Highest level of education completed



The average age of respondents was 56 years of age, and 50% of individuals fell between the ages of 56 and 75.

Figure 3: Year born



Study Limitations
In selecting farmer participants, the research methodology was designed to use a stratified sampling method, but the timing of the research coincided with a streak of unusually warm weather and farmers were heavily engaged in production activities. To increase participation, the pool of potential farmer participants was expanded and accordingly, the sample of farmer participants is best described as self-selected. Because of their higher frequency at farmers markets, farmers growing produce and using organic methods were oversampled as compared to the general farmer makeup of the region.

RESEARCH CONTEXT

In Western North Carolina, the majority of farms producing food for direct sales at farmers markets describe themselves as using sustainable production methods. The analysis of production practices from the *Local Food Guide* shows that by 2008 (the year ASAP began to collect production practice data and several years into the Local Food Campaign) a significant proportion of farmers growing for local sales in Western North Carolina (across direct and non-direct markets) indicated using sustainable growing methods. Table 2 shows, for example, that 47% of farms producing food for local markets described themselves as using organic methods.

Table 2. Percentage of farms using specific growing practices in proportion to all farms, 2008

	Number of Farms 2008	**Percent of all farms in 2008**
Animal Welfare Approved	(2013) 5	2.4%
Biodynamic	21	10%
Certified Naturally Grown	5	2.4%
Conventional	32	15.2%
Free Range	44	20.9%
GMO-Free	48	22.7%
Humanely Raised	59	28%
Integrated Pest Management	50	23.7%
Low Spray	37	17.5%
Certified Organic	12	5.7%
Organic, Non-Certified	88	41.7%
Pasture Raised	44	20.9%
Permaculture	29	13.7%
Wild Harvested	21	10%

Sustainable practices have increased from 2008 to 2016. Table 3 summarizes the change in number of farms using particular growing practices from 2008 to 2016. Increases occurred across all practices, but the greatest growth in number of farms occurred in Certified Naturally Grown, GMO-free, and organic non-certified. The number of farms using conventional, biodynamic, and certified organic practices saw the least growth.

Table 3. Change in the number of farmer using particular farming practices

	Number of Farms 2008	Number of Farms 2016	Change in Number of Farms	Percent increase
Animal Welfare	(2013) 5	16	11	220%
Biodynamic	21	51	30	143%
Certified Naturally Grown	5	24	19	**380%**
Conventional	32	61	29	91%
Free Range	44	166	122	277%
GMO-Free	48	207	159	**331%**
Humanely Raised	59	173	114	193%
Integrated Pest Management	50	161	111	222%
Low Spray	37	108	71	192%
Certified Organic	12	31	19	158%
Organic, Non-Certified	88	298	210	**295%**
Pasture Raised	44	161	117	266%
Permaculture	29	94	65	224%
Wild Harvested	21	72	51	243%

Tables 4 and 5 look at the number of farms using specific growing practices in relation to the total number of farms in the *Guide* for that year. The first table shows trends in growing practices for all farms - those that sell to direct as well as non-direct market outlets. The second table looks at the practices of farms selling exclusively through direct-to-consumer outlets. Table 4 shows that in proportion to all farms in the *Guide*, the percent of farms using biodynamic, conventional, and certified organic practices decreased from 2008 to 2016, a pattern reminiscent of the data in Table 3. The percentage of farms using non-certified organic, GMO-free, and free range practices increased the most.

Table 4. Percentage of farms using specific growing practices in proportion to all farms

	Number of Farms 2008	Number of Farms 2016	Percent of all farms in 2008	Percent of all farms in 2016
Animal Welfare Approved	(2013) 5	16	2.4%	2.7%
Biodynamic	21	51	10%	8.5%
Certified Naturally Grown	5	24	2.4%	4%
Conventional	32	61	15.2%	10.1%
Free Range	44	166	20.9%	**27.5%**
GMO-Free	48	207	22.7%	**34.3%**
Humanely Raised	59	173	28%	28.7%
Integrated Pest Management	50	161	23.7%	26.7%

Low Spray	37	108	17.5%	17.9%
Certified Organic	12	31	5.7%	5.1%
Organic, Non-Certified	88	298	41.7%	**49.4%**
Pasture Raised	44	161	20.9%	26.7%
Permaculture	29	94	13.7%	15.9%
Wild Harvested	21	72	10%	11.9%

Table 5 also shows that in relation to all farms in the *Guide* the percentage of farms using biodynamic and conventional practices fell from 2008 to 2016 as well as farmers using integrated pest management, low spray, and, by one percentage point, permaculture. Non-certified organic, GMO-free, and wild harvested had the largest increases.

Table 5. Percentage of farms (with exclusive sales to direct market outlets) using specific growing practices in proportion to all farms

	Number of Farms 2008	**Number of Farms 2016**	**Percent of Farms in 2008**	**Percent of Farms in 2016**
Animal Welfare Approved	(2011) 1	4	(2011) 1%	2%
Biodynamic	6	9	19%	9%
Certified Naturally Grown	2	6	6%	6%
Conventional	6	6	19%	6%
Free Range	7	28	23%	29%
GMO-Free	6	31	19%	**32%**
Humanely Raised	8	28	26%	29%
Integrated Pest Management	11	28	35%	29%
Low Spray	8	21	26%	21%
Certified Organic	4	1	0%	1%
Organic, Non-Certified	14	57	45%	**58%**
Pasture Raised	6	22	19%	22%
Permaculture	6	18	19%	18%
Wild Harvested	2	15	6%	**15%**

Taken together, the *Local Food Guide* data on organic production - the greater number of farms using non-certified organic in comparison to certified organic - suggests the importance of face to face interaction in farmers markets for building consumer confidence and trust in farmers' growing practices. Given customer interest in food grown organically, the increase in farms indicating non-GMO practices and a downward trend in farms marketing conventional methods is not surprising. The relative insignificant number of farms claiming biodynamic, permaculture, and Certified Naturally Grown practices may be related to the lack of consumer recognition of the terminology. Supporting this possibility, one of the farmers interviewed in this study (whose products had been Certified Naturally Grown) decided to shift to organic certification because she felt that for the majority of her shoppers Certified Naturally Grown was unknown.

The remainder of the report focuses on findings at the market level drawing on the data collected from farmer interview and farmers market shopper surveys.

RESEARCH FINDINGS

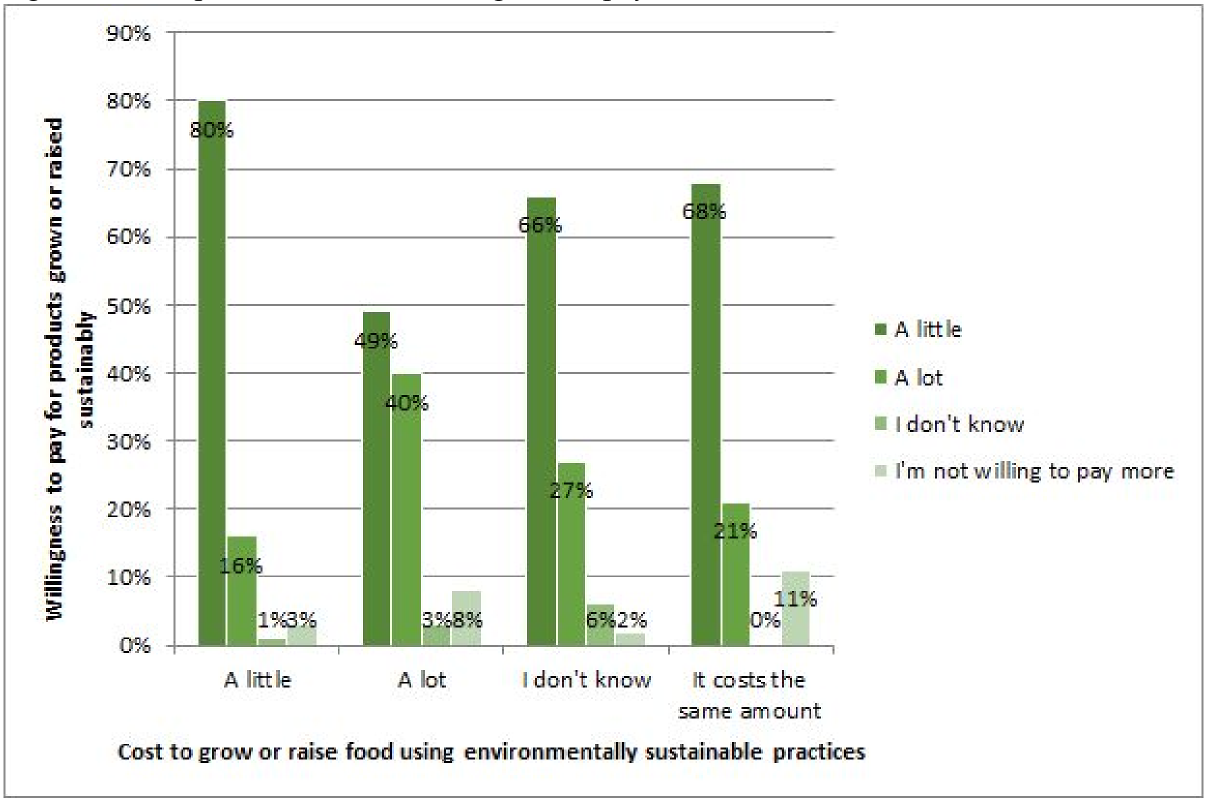
Farmers market shoppers say they want food produced in environmentally sustainable ways. They want to know the growing practices farmers use.
83% of the farmers market shoppers surveyed indicated that they look for food that has been grown or raised in environmentally sustainable and humane ways. 97% indicated they were interested (59% very interested, 38% somewhat interested) in farmers' growing practices.

Organic was the top quality named by farmers market shoppers when asked what practices they look for, comprising 44% of the qualities named. 28% of shoppers expressed their interest in production methods that do not use chemicals, using the terms "no spray," "low spray," "pesticide free," "herbicide free," and "no chemicals." 34% indicated a concern with the treatment of animals in meat and egg production, using the terms "pasture raised," "free range," "cage free," "grassfed," and "humane" or "humanely-raised."

In comparison, all of the farmers interviewed noted that the most common questions they receive from shoppers are around organic production: Is it organic? Is it organic certified? Is it grown organically? In addition, some farmers reported that "do you spray [with pesticides or herbicides]?" is a common question. One farmer hypothesized that "no spray" has become a shorthand for distinguishing organic from non-organic methods (even though, as he noted, farmers growing organically can use approved sprays). For farmers using less well-known methods like biodynamic and Certified Naturally Grown, shoppers ask farmers to explain what these methods mean. To farmers selling meat and eggs, shoppers ask what the animals are fed. For example, are they getting organic feed or is the feed non-GMO? Shoppers also ask about the life and treatment of the animals. For example, "do the animals have access to the outdoors?" and "are they on pasture or are they free range?"

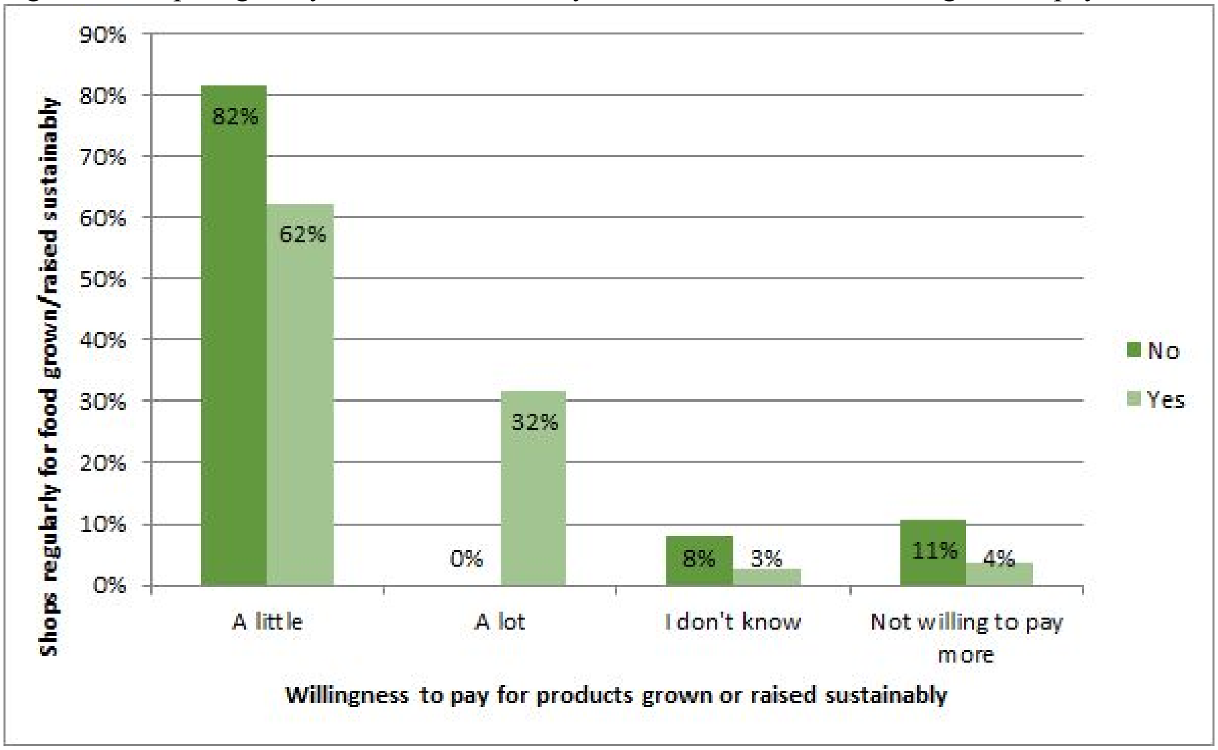
Farmers market shoppers say they are willing to pay more for food grown or raised in sustainable ways.
The farmers market survey asked shoppers to indicate how much more they think it costs to grow or raise food using environmentally sustainable practices (compared to conventionally-grown food) and how much more they are willing to pay for food grown in sustainable ways. Compared to conventionally grown products, 63% of shoppers think it costs more to grow or raise food in environmentally sustainable ways, 31% think it costs "a lot" more, and 32% believe it costs "a little" more. Figure 4 shows how shoppers' perceptions of cost correlate to their willingness to pay for food produced in environmentally sustainable ways. The figure shows that those who believe it costs "a little" more to produce food in environmentally sustainable ways are willing to pay a little more, and those who perceive it costs "a lot" more have a greater willingness to pay a lot more. Interestingly, the willingness of shoppers who indicated they "don't know" how much more it costs or that "it costs the same amount" expressed that they were willing to pay a little more for food produced in environmentally sustainable ways.

Figure 4: Perception of cost and willingness to pay



A deeper look shows that, of the shoppers who regularly shop for food grown using environmentally sustainable practices, 31% are willing to pay a lot more and 62% are willing to pay a little more. Of the shoppers who indicated they do not regularly shop for food produced in environmentally sustainable ways, 82% indicated they are willing to pay a little more.

Figure 5: Shops regularly for environmentally sustainable food and willingness to pay



Farmer production practices are influenced by a variety of factors.
In interviews, farmers connected their decisions to use specific growing methods to a variety of reasons. For many farmers, personal beliefs played a key role. Farmers variably connected their personal beliefs to their upbringing, to the desire to be a good steward of the land, and to produce food in ways that address the negative impacts of industrial scale agriculture. Some organic farmers cited market conditions - the opportunity that has come with growth in larger organic market as well as demand expressed directly by shoppers at markets. Other farmers, those growing conventionally or using a mix of organic and conventional practices, cited the practicalities imposed by the climate and conditions of the region. For these farmers growing food in this humid subtropical region requires the use of conventional sprays to deal with high disease pressure.

Interactions with farmers have increased shoppers' knowledge, changed the way they think about food and agriculture, and influenced their shopping patterns.
When asked how their interactions with farmers on their growing practices influence their actions, a majority of the shoppers indicated that because of their conversations with farmers at markets they have decided to purchase from those farms because they approve of their growing practices (61%). Conversely, another 24% indicated they have decided not to purchase from particular farms because they do not approve of those farms' growing practices.

Shoppers also indicated that their conversations with farmers have had impacts that go beyond immediate purchasing decisions. 66% of shoppers surveyed indicated that they think more about what they are eating and how it is grown. 62% indicated that through their interactions with farmers they have learned more about growing practices, and 62% indicated that because of their interactions with farmers, they have decided to shop more frequently at farmers markets.

Market shoppers also look for local food in other venues based on their farmer's market experiences. 57% of shoppers surveyed indicated they purchased locally-grown food at a grocery store, restaurant, or other outlet that they first learned about at a farmers market. The significance of this statistic for farmers' sales and for broader food system dynamics becomes clearer when we look at the number of farmers in the region that sell both through farmers markets and other direct-to-consumer outlets and non-direct outlets like grocery stores and restaurants. Of the 256 farms that sold food through farmers markets in Western North Carolina in 2016, 57% (146) also marketed their products to non-direct market outlets. Together these data demonstrate the relationship between farmers markets and the region's larger food system and the impact market experiences can have on other consumer food purchasing patterns.

Farmers market shoppers make assumptions about growing practices.
Farmers report that they are infrequently asked about their growing practices. Farmers speculated on the reasons for this: repeat shoppers that already know them and their growing practices, signage at the stall explicitly stating their growing practices, shoppers that are not concerned about growing practices, and shoppers that assume farmers growing locally are also growing sustainably.

The survey with farmers market shoppers confirm some of the farmers' perceptions. 12% of shoppers indicated that they only shop from farmers they know and whose practices they already know about. A small minority of shoppers (3.1%) indicated that they are not concerned about farmers growing practices at all.

For the 23% of shoppers that indicated they do not ask farmers about their growing practices, 44% said that if the farmer is selling at the market, they assume they are using sustainable practices. Additionally, when asked what sustainable practices they are looking for when they shop for food generally, 18% of shoppers included "local" in their response. The majority of respondents named local in a list with other practices. This suggests that a significant number of farmers market shoppers believe, at some level, that "local" implies food grown in sustainable ways.

Farmers market shoppers want clear signage on growing practices.
Nearly 70% of survey respondents indicated they want to see clear signage at farmers' stalls stating their growing practices. Half indicated they want farmers to display their growing certifications if they have any.

Some farmers also recognize the importance of good signage. In busy market environments, where farmers are attending to multiple shoppers, posting growing practices information at their stalls (with a banner, a sandwich board, on specific product labels, etc) can be an important time management strategy. Displaying production practice signage may save frustration on the part of farmers and shoppers. As suggested by one farmer, having clear signage may also make the difference in a sale. That farmer offered, "I'd be afraid that without the sign, I'd lose shoppers….that maybe they would assume I produced conventionally and they don't feel comfortable asking."

Customer survey findings provide some support for this assumption. Of the 23% of market shoppers that indicated they do not ask farmers about their growing practices, 32% said they do not ask because they do not feel they know enough about growing practices to ask about them. Additionally, 7% said they do not ask because farmers are typically busy with other shoppers or talking to other farmers, and another 7% indicated they simply do not feel comfortable asking or do not want to talk to other people at the market.

Farmers think market shoppers are not well-informed about growing practices.
All farmers interviewed pointed to the need for consumer education around growing practices - what different growing method designations mean, on the reasons why small scale production is more expensive, to address the assumption that "local food" means environmentally sustainable or humane, to help consumers be better consumers (i.e., provide them with guidance and information so that they can ask informed questions and engage in constructive conversations with farmer on their preferences and farmers' practices). Most shoppers, they felt, are not well-informed about growing practices and there are a lot of misconceptions around specific practices, including organic and conventional production.

For example, a common question farmers get from shoppers is "do you spray," which one farmer hypothesized has become another way of asking "are you organic?" Another farmer noted that many shoppers make assumptions about local food and do not engage with farmers about their growing practices and perhaps do not know how (e.g., do not know the kinds of questions to ask). Findings from the shopper survey provide some support for this conjecture. Of the shoppers that indicated they have not talked with a farmer about their growing practices, 44% indicated they do not because they assume that if they are selling at the farmers market they are using good practices. 32% indicated they do not because they do not feel they know enough about growing practices to have a conversation with a farmer about them.

Conversations about farmer growing practices can be difficult in busy farmers market environments.
Farmers noted that the markets, though providing a place for face to face communications with their customers, can also be challenging environments to discuss complex issues like growing practices. In busy markets, farmers need to attend to multiple shoppers and are multi-tasking - answering questions about products and pricing, weighing product, taking money, and making change.

From the perspective of some farmers, the difficulty also stems in part from the challenging nature of some customer encounters. Farmers using organic methods and farmers using conventional methods have experienced unpleasant customer interactions at farmers markets around their practices and around product pricing. Farmers stated that during these encounters the customer approach can be combative.

RECOMMENDATIONS

Communicate growing practices to shoppers.
Farmers market shoppers want to know the growing practices farmers are using - 97% of surveyed indicated they were interested in farmers' growing practices. In addition, nearly 70% indicated they want to see clear signage at farmers' stalls stating their growing practices. Half indicated that, if they have them, they also want farmers to display their growing certifications.

For farmers selling product in busy market environments, where they are attending to multiple shoppers and making change, posting growing practices information at their stalls (for example, with a banner, a sandwich board, on specific product labels, etc) is an important time management strategy and may also make the difference in a sale. Of the 23% of farmers market shoppers that indicated they do not ask farmers about their growing practices, 32% said they do not ask because they do not feel they know enough about growing practices to ask about them, 7% do not because farmers are typically busy assisting other shoppers or talking to other farmers, and another 7% because they do not feel comfortable asking or simply do not want to talk other people at the market.

Describe growing practices succinctly.
For shoppers that ask about growing practices, farmers need to be prepared with a straightforward response, a brief "elevator speech" that they, their employees, and/or their interns use to communicate about the farm's growing practices. For farmers using well-known methods, the elevator speech may be one sentence, e.g., "we're certified organic" or "we use organic methods but are not certified." For farmers growing in ways that are less familiar and require more explanation, the process of crafting an elevator speech will help them hone in on the essential information. For example, one farmer, who follows the Certified Naturally Grown program, noted that she developed an elevator speech because she found most shoppers were unfamiliar with the program and its standards. She responds to shoppers by saying, "We are Certified Naturally Grown, which is based on the national organic standards. We don't do anything that wouldn't be allowed in that program."

Shoppers that want more indepth information about growing practices will ask for more information, and farmers can be prepared to provide it verbally and/or with information shoppers can take with them in pamphlets, rack cards, or other printed materials.

Connect to other market outlets.
Through face to face interaction and the opportunity to promote their products, their farm, their practices, etc, farmers markets provide farmers with significant opportunities to build trust in their products and a loyal customer base that will continue to seek out their products. Findings from the survey with farmers market shoppers show that experiences in farmers markets influence what they shop for outside of farmers markets and the importance of farmers markets to sales in other outlets. When asked if they purchased locally grown food at a grocery store, restaurant, or other non-direct outlet that they first learned about at a farmers market, 57% of farmers market shoppers said yes.

In addition, findings from the farmers market shopper survey indicates that shoppers' experiences at the market have larger impacts with relevance to demand for food from local farms more generally. 66% of shoppers surveyed indicated that they think more about what they are eating and how it grown. Another 62% indicated that because of their interactions with farmers, they have decided to shop more frequently at farmers markets.

The significance of this statistic become even clearer when we look at the number of farmers in the region that sell both through farmers markets and other direct-to-consumer outlets and non-direct outlets like grocery stores and restaurants. Of the 256 farms that sold food through farmers markets in Western North Carolina in 2016, 57% (146) also actively marketed their products to non-direct market outlets. Expanded to include farms that sold food through all direct-to-consumer outlets, more than half (54%) of the 375 farms that sold to farmers markets as well as CSAs, roadside stands/farm stores, and u-picks also marketed their products to non-direct outlets.

Educate about growing practices.
When asked what would be helpful to them in communicating their growing practices, the overwhelming recommendation by farmers was consumer education. All farmers interviewed pointed to a need for consumer education: what different growing method designations mean, the reasons why small-scale production is more expensive, to address the assumption that "local food" means environmentally sustainable or humane, to provide consumers with information they can use to engage in informative conversations about farming practices and costs. Despite the feeling that face to face communication is best, several farmers indicated that talking with shoppers about growing practices in farmers market environments is not always possible when markets are busy. Given that consumers sometimes have false understandings of growing methods, busy farmers do not always have the time to engage in informative conversations with shoppers.

Increasing consumer knowledge is about more than providing consumers with information, but also creating additional opportunities suitable for conversation about farmer growing practices and the costs of sustainable growing methods. Information about practices and costs can be communicated in multiple ways and through multiple channels.. Farmers markets should explore the establishment/addition of a booth/stall dedicated to providing shoppers with information and fielding questions about growing methods and costs.

Promote producer-only markets.
Several farmers indicated that in addition to questions about their growing practices, shoppers are also interested, and in some cases more interested, in knowing whether farmers grow the food that they are selling. A survey with farmers producing for local markets in the region supports this finding - 75% of farmer respondents indicated that shoppers often ask them if they have grown or raised the food they are selling.[4] In Western North Carolina, the majority of

[4] Local Food Research Center, ASAP (2016) *2015 Appalachian Grown Producer Survey Report*. Asheville, NC. Retrieved from: http://asapconnections.org/local-food-research-center/reports.

farmers markets are “producer-only,” a market-level policy that requires farmers vending at the market to sell what they produce themselves. This finding suggests a strong need for public outreach and communications about producer-only markets and their locations.