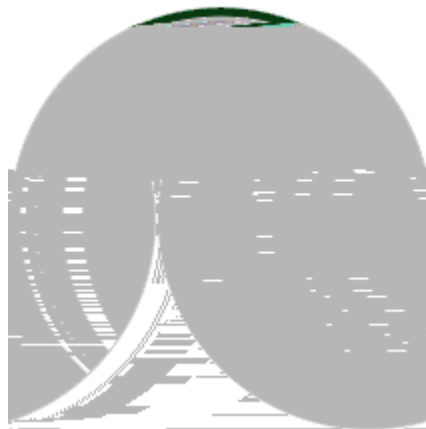


The Locavore's Delight:

A LOCAL FOOD SYSTEM ASSESSMENT of THE CAPITAL REGION

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Abstract

Local food has become trendy in recent years with many scholars citing the community, environmental, and economic benefits of a strong local food system. Through structured interviews, surveys, focus groups, and field visits, we constructed an overview of the local food system of the New York Capital Region. The Capital Region is unusual in its agricultural diversity and its high volume of local food. Many farmers in the area prefer to sell their products locally because it is convenient and profitable regardless of what they produce or how long they have been farming. Overall, the Capital Region is an excellent example of a strong local food system.

Keywords: local; direct to consumer; food system assessment; farm; markets; Capital Region; semi

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I: Introduction

The Local Food Movement has gone from relative obscurity to widespread recognition in a short span of time, with the number of farmers' markets, Community Supported Agriculture

marketing channels, and lastly, how newer farmers are faring in the local food system and how they are altering its direction.

A. Defining “Local”

Despite the momentum of the local food movement and the widespread interest in shopping locally, there is no universal definition of the term “local” with respect to food. This has been a consistent challenge for many stakeholders in the push to localize food s

they consider 100 miles to be “really, really far,” and, rather, that a 25-mile radius would be a more appropriate definition (Washington County Farm Bureau 2017 April 10).

Still, others involved in the local food movement avoid any numerical definition of local food at all, and instead prefer to classify food as local based on the channels through which they are sold. By this reasoning, direct to consumer sales methods, such as farmers’ markets, farmstands, and CSA shares, are considered to be local food sales methods, whereas more

local selling opportunities are available, farmers who sold through direct to consumer channels were able to increase profits significantly, as shown in Figure 1 (2014).

Figure 1: Percentage difference in net producer price for local and mainstream supply chains. Certain products in certain places have profit differences of up to 647% (Lev et al. 2014).

Additionally, farms that sold through direct to consumer marketing channels were more likely to stay in business between 2007 and 2012 than farms that sold through traditional channels (USDA 2015). Of course, these increases in profit are dependent on the availability of local selling opportunities for farmers. Many do not have the luxury of choosing where to sell their products due to factors such as a lack of nearby markets. This is one argument for increasing the availability of local food markets. Another is that in many regions, when certain types of produce are sold directly to consumers, their prices are lower than retail prices, despite the farmers making a greater profit (USDA 2015). Lower prices for consumers and higher profits for farmers are possible in direct to consumer channels due to the lack of processing and, therefore, lack of a need to pay a middleman. This shows that it is in the interests of both local farmers and consumers, as well as communities in general, to make local food markets available.

Farms that sell locally are often more in touch with their consumers' desires, and therefore may be more likely to adapt their growing techniques to customers' environmentally

since consumers purchase 90% of their food in grocery stores (Dyckman et al. 2016). However, many consumers believe that there is a lack of local food options available to them, which is one of the main barriers of purchasing locally (Martinez et al. 2010).

D. Food System Assessments

One of the most commonly used tools for evaluating food systems, local or otherwise, is a Food System Assessment (FSA). FSAs are used for a range of purposes; some look at areas of food insecurity, some are more focused on economics, and others try to cover every possible aspect of a food system, following the whole supply chain from production to waste disposal (Tufts 2013). While there are many different types of FSAs, all of them seek to understand a particular food system in detail.

FSAs use a wide variety of methods, but some of the most common trends include the use of semistructured or structured interviews, surveys, focus groups, direct observation, and GIS mapping. Nearly all FSAs benefit from the data and research of organizations such as the USDA and the Census Bureau (Tufts 2013).

E. Benefits of Direct to Consumer Sales

While some literature on local food systems uses the terms “local food” and “direct to consumer” almost interchangeably, these two terms are distinct, and are both key considerations of the local food movement. Most local food sales are made through marketing channels which are classified as “direct to consumer,” meaning that products are sold from the farmer to the consumer without the use of an intermediary market, such as a wholesaler or a distributor. There is a large overlap between direct to consumer sales and local sales, as 70% of farms in the U.S. that sell locally use direct to consumer marketing channels, and essentially all direct to consumer sales are local (USDA 2015).

Many advocates of localized food systems emphasize the benefits of direct to consumer sales in particular. One of the most significant benefits of direct to consumer sales is that it improves the economic viability for farmers, especially small farmers (Adam et al. 2016). By eliminating the need for an intermediary market, farmers are able to set their own price in order to guarantee a profit. Direct to consumer marketing also strengthens personal connections between farmers and the larger community (Adam et al. 2016). This helps increase the visibility of local products in the marketplace and allows farmers to receive vital customer feedback.

II: Methods

A. SemiStructured Interviews

To begin our data collection process, we conducted semi-structured interviews with Capital Region farmers and other stakeholders in the regional food system. We reached out to local farm bureau field staff and the Cornell Agricultural Extension office in order to help us get in contact with farmers in the eleven counties that comprise the Capital Region (Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schoharie, Schenectady, Warren and Washington). Additionally, we were able to find contact information for many farmers on several counties' websites. We visited the Saratoga Springs and Greenwich farmers' markets where we conducted multiple interviews. We also conducted 22 phone interviews with farmers from Saratoga, Rensselaer and Washington counties, representatives from 3 local supermarkets, Price Chopper, Healthy Living, and Four Seasons; Aaron Gabriel, Soils and Crops Educator at the Cornell Cooperative Extension; Allison Akins, Young Farmer Representative for the Washington County P(he)u(u)2 ()2 m BY thshu5 (;(o)2 (u2 ()2 P(he))2 (itiv)2 l(oi)10 ()JTJ w)4 (s)-3 (i)

Cooperative Extension; and Tridie Blackwood, President of the Washington County Farm Bureau.

While interviewing farmers, we began with a short list of prepared questions (Table 1). The semistructured style of interviewing allowed us to stray from our original questions and focus on the subjects that each farmer found most important. This approach allowed us to get a better sense of what the farmers felt were the main barriers and strengths of the local food system, which was ultimately critical in drafting the survey later on in our study.

1) Tell me a little bit about your farm. How did you get involved in farming? How many acres do you cultivate? What kind of products do you produce?

2) Where do you sell your products? Why?

distribute it (Appendix 1). Our survey questions were adapted from a 2015 USDA survey on local food marketing practices (USDA 2015). We chose to use the USDA survey questions so we could compare our results to the findings of that survey, allowing us to compare our results to national averages. Questions were also developed based on trends noticed during the interview process.

In order to reach a representative sample of farmers, we reached out to many stakeholders in the Capital Region. Aaron Gabriel at the Cornell Agricultural Extension sent our survey to a list of 1500 farmers. We also contacted the three Farm Bureau field staff who collectively represent the eleven counties, Todd Heyn, Renee Schoonmaker, and Kim Trombly. These three people each sent the survey to their lists of farmer constituents. We then used Qualtrics, Microsoft Excel and SPSS to analyze and visualize the data that we collected from the surveys.

C. Focus Group

In addition to our interviews and surveys, we conducted a focus group at the Washington County Farm Bureau board meeting, held at the regional office in Salem, New York. In attendance was a group of different stakeholders from across Washington County, which is one of the most agriculturally prolific counties in the Capital Region. The bureau members in attendance were President Tricia Lockwood, Young Farmer Representative Allison Akins, four farmers, an agricultural marketing specialist, and several other stakeholders from various sectors of the local agricultural industry. We introduced them to our project and asked them for feedback on our survey, as well as for their input on why the results looked the way they did. The focus group was valuable to our understanding of the results, because it allowed the participants to converse with each other as well as with us, which clarified the concepts that everyone agreed

on, as well as ideas that were more controversial. The Farm Bureau board also gave us suggestions for how to get in touch with more farmers, as well as regional distributors.

D. Field Visit

In order to gain more personal insight into the ~~day~~ ^{daily} routines of Capital Region farmers, we visited Durkacres Farm in Washington County on April 22, 2017. We were given a tour of the 100-acre farm, observed the birthing of a calf, and assisted ~~the~~ ^{with} daily chores such as feeding, milking, and the Stewart's milk pickup. We also spoke with several members of the

their motivations, 9 said that they valued the focus on local food that their selected markets provided. 7 stated that they chose to sell in these markets based on personal convenience, and another 6 stated that price was their biggest consideration in choosing market channels. Five respondents indicated that face-to-face customer interactions were the most valuable. When asked how farmers decide what to grow from season to season, 5 said that it was based on consumer demand, but 3 responded that they chose their products based on their personal preferences. All of the farmers interviewed agreed that ultimately they had to do what made the most sense for them in terms of convenience and profitability.

2. Local Agricultural Experts

Interviewing nonfarmer stakeholders provided additional insights into the food system of the Capital Region. Many of the experts stated that there was an abundance of local food available in the Capital Region. Aaron Gabriel, Soils and Crops Educator with the Cornell Cooperative Extension in Washington County, said that one of the biggest barriers for farmers when it came to selling their products was marketing and that farmers sometimes struggled to gain a reputation for producing dependable and high-quality products, particularly with large retailers in the region.

3. Grocery Chains

One of the most common trends in responses from grocery stores was that sourcing from smaller local farmers could be difficult logistically. Having a greater number of farms supplying the products means more paperwork, more transportation logistics, and it can be difficult to find farms with enough consistency in the quantity and quality of their products while also having the necessary certifications. That being said, the stores all cited their general desire to have local

food within their stores as it is something that many customers are looking for and ~~usually~~ pay more for.

Price Chopper Marketing Program Coordinator Tyler Blance stated that Price Chopper, like many grocery stores, requires third party certifications like the Good Agricultural Practices (GAP) certification, which many smaller farmers ~~are~~ not afford (2017 March 13).

B. Survey

In total, 190 farmers responded to the survey. This equated to 3.9% of the total 4,848 farms in the Capital Region (USDA 2012). Rensselaer and Washington counties had the highest number of respondents (Figure 2). ~~Howe~~ Washington and Montgomery counties have the highest percentage of farms in the Capital Region (Figure 3).

Figure 2: Percent of respondents from each county.

Figure 3: Percent of Capital Region farms in each county (USDA 2012).

1. Farm Size

In 2012 the average size of a farm in the Capital Region was 159 acres (USDA 2012). However, the average farm size of survey respondents was 280 acres, which is over 100 acres larger than the average farm in the Capital Region. Respondents' farm size ranged from a quarter of an acre up to 4,000 acres. That being said, the majority of survey respondents have farms that are between 499 and 100 acres (Figure 4). The total farmland of survey respondents is 52,778 acres, while the total farmland for the entire Capital Region is 849,781 acres (USDA 2012).

Figure 4: Number of farms in each acreage category.

2. Diversity of Crops Grown

Looking at the diversity of products being produced by individual farms, 46.6% of respondents indicated that they produced grains, or straw for animal consumption. The second most selected product category was vegetables, melons, and potatoes with 42.6% of respondents. As the survey format allowed farmers to select more than one category, the percentages shown do not add up to 100% overall (Figure 5).

Figure 5: Percent of farmers who produce each product category.

Using SPSS cross tabulations, the diversity of production at an individual farm level was calculated. Overall, 75.3% of the respondents indicated that they produced one product category with 30.5% producing two product categories (Figure 6).

Figure 6: Percent of farmers who produce one or more product categories.

3. Diversity of Local Markets

When asked where they sell their products, 68.4% of farmers responded that they sold their products “direct to consumer.” In a breakdown of individual market channels, eight were determined to be “direct to consumer.” The two most frequently selected market channels were both direct to consumer (farmers’ markets and stands or roadside stands) and the third most popular choice was indirect to consumer (restaurants) (Figure 7).

Figure 7: Percent of farmers who sell to each location.

SPSS cross tabulations indicated that a majority of farmers (68.1%) were selling their products through more than one channel. Of that 68.1%, 45.7% were selling through 2-channels with another 22.4% selling through 5 or more channels (Figure 8).

Figure 8: Percent of farmers selling through one or more channel.

4. Local and Direct to Consumer Sales

Despite the significant increase in the popularity of local food, only 7.8% of farms nationally are selling through local channels (Figure 9). However, 80% of survey respondents are selling their products locally. The amount of Capital Region farmers who are selling locally is over ten times the national average. Furthermore, the USDA defines local food as products sold within 400 miles, while in this survey local food was defined as food sold within 100 miles (USDA 2015).

Figure 9: Percent of farmers selling locally.

5. Surplus Product

We also examined the various channels through which surplus products are moved throughout the Capital Region food system. The most popular answer was “I do not have any leftover products,” with 43.7% of respondents selecting this option (Figure 10). Of the 56.3% of respondents who do have surplus products, the majority feed leftover products to farm animals or donate to a local food pantry. The two most common ‘other’ responses were to compost or give leftover products to friends and family. Many of the farmers who were asked about leftover products during interviews explained that local organizations, such as Franklin Community Center, either come to their farms or to local markets and collect surplus products there.

Figure 10: Percentages of responses to “What do you do with your leftover products?”

6. Farmer Income

A slight majority of survey respondents do not use farming as their primary source of income (Figure 11). The average percent of income of farmers who do not farm as their primary source of income is 22%. Thirteen respondents stated that although farming is not their primary source of income, it makes up 50% or more of their total income. Six respondents do not make a profit from farming, while two farmers lose money from their farming operation.

Figure 11: Percent of responses to “Is your farm your primary source of income?”

7. Established and Nonestablished Farmers

In order to assess how the Capital Region Food System may be shifting, we looked specifically at new farmers, using the USDA’s classifications of farm age. The USDA defines an “established” farmer as someone who has been farming for ten or more years while a “nonestablished” farmer is someone who has been farming for fewer than ten years (USDA 2015). The survey sample consisted of 74.7% established farmers and 25.3% nonestablished farmers. The average age of an established farm in the survey sample was 35 years, while the average age of a nonestablished farm was 5 years. There were eight farmers in the established category whose farms had been in existence for 100 or more years, with one farm going back ten generations. There were several notable differences between the two categories of farmers in terms of farm size, which crops they produce and where those crops are sold.

The average size of an established farm was 333.6 acres, while the average size of a nonestablished farm was 115.6 acres. In total, established farmland made up 47,473 acres of the survey sample, or 89.3% of the sample, while nonestablished farmland was only 5,432 acres in total, or 10.3% of farmland in the survey sample.

Crosstabulation of the survey results revealed that established farmers were 22.1% more likely to grow grains for animal consumption than nonestablished farmers were. However, there were three categories which nonestablished farmers were more likely to produce: Vegetables (18.3% more likely), Pigs and Cattle (12.1%), and Poultry and Eggs (28.8%) (Figure 12). The remaining categories did not have statistically significant differences.

Figure 12: Percentage of established (blue) and nonestablished (purple) farmers who produce each category of products.

There were also distinctions in where established and nonestablished farmers sell their products. Established farmers were 8.7% more likely to sell through a wholesaler, while nonestablished farmers were more likely to sell through two types of markets: Farmers' Markets (19.7% more likely) and Community Supported Agriculture (CSA) shares (18.6% more likely) (Figure 13). Established and nonestablished farmers were equally likely to sell through direct to consumer channels. The remaining channels did not have statistically significant differences.

Figure 13: Percent of established (blue) and nonestablished (purple) farmers who sell through each channel.

8. Farmer Perceptions

This section of the survey consisted of a question matrix, where farmers were asked to evaluate how well they feel the Capital Region Food System is functioning (Appendix 1, Question 10). The data from the matrix was analyzed using Qualtrics, SPSS, and Microsoft Excel. In order to simplify the data, it was sometimes combined into three categories: agree, disagree, and neither agree nor disagree. This was done by combining the “strongly agree” and “somewhat agree” categories, and the “strongly disagree” and “somewhat disagree” categories.

The responses revealed that a majority of Capital Region farmers in the survey sample believe that it is convenient and profitable to sell in the Capital Region (Figure 14). Responses to the matrix were not correlated with whether the farm was established or nonestablished.

Figure 14: Percentages of established and ~~not~~ established farmers who either agree or strongly agree that it is profitable and convenient to sell locally, and that they are satisfied with where they currently sell.

A plurality (35.8%) of farmers believe that they could not make a better profit if they sold their food farther away than they currently do. Additionally, 74.5% of survey respondents are satisfied with where they are currently selling their products. Most respondents (73.1%) believe that selling their products locally is profitable. Lastly, the majority of respondents (61%) also agree that they do not produce enough to sell to a large buyer, such as a grocery store.

C. Focus Group

The focus group was conducted at a meeting of the Washington County Farm Bureau in Salem, New York, on April 10th, 2017. The entirety of the Farm Bureau Board was in attendance, and the meeting was facilitated by Patricia Lockwood, the President of the Board. There was a diverse range of food system stakeholders present, with dairy farmers, vegetable farmers, a Farm Credit East employee, and a financial advisor, among others.

The survey was presented and focus group participants were asked for feedback on the questions and to comment on the preliminary trends that were beginning to emerge at the time of

IV: Discussion

A. Availability of Local Food

One of the most striking statistics produced by the survey was that 80% percent of farmers in the Capital Region are selling their products locally. This makes the Capital Region very unusual in terms of the quantity of local food available. Comparatively, USDA data shows that only 7.8% of farmers nationwide are selling their products through local markets, which puts the Capital Region at around ten times the national average. However, that difference is more significant when the different definitions of “local” are taken into consideration. The USDA’s definition of local food is products sold within 400 miles of where they were produced (USDA 2015). For our study, we defined “local” as products sold within 100 miles of the farm, because we were interested in finding how many farmers were driving to New York City to sell, and this radius excluded New York City. Furthermore, during our focus group, we discovered that the board members of the Washington County here (r)-7 (2874 (pr)a 2c3 (e)4 (d)2 (y)20 (.d (2874

Naylor of Farnhamville, Iowa, are forced to grow in the largest quantities possible, and then sell exclusively to the local grain elevator. This type of agriculture, which generally goes hand in hand with fertilizers and pesticides that harm the soil, is widely regarded as both unsustainable for the land and economically challenging for farmers (Pollan 2006). Industrial farming like this has become more and more centralized over the last several decades, and many local food advocates name local food sales as a way to alleviate this troubling trend. Research has shown that selling locally often leads to a higher diversity of crops (Grubinger 2010).

Our survey results showed that farmers in the Capital Region are producing a wide variety of crops and other food products. This is a promising finding for the economic and environmental resilience of the local food system. We asked our participants to select which of the nine USDA product categories they produce. Overall, there was no one product category selected significantly more than the others, indicating a high level of diversity of products in the area. Grains for animal consumption, such as corn and hay, were the most popular, but not by a large margin. Product categories for human consumption, including fruits and vegetables, were also very popular.

Using the USDA classifications for product categories proved beneficial because it allowed us to compare our data with national averages. However, it also had certain drawbacks. For instance, we were unable to tell from the survey results how many different crops farmers were growing within each product category. Therefore, a farmer could have selected multiple product categories, yet could still be practicing monocropping. However, the interview data largely suggested that monocropping is relatively unpopular in the Capital Region. Many farmers cited the necessity of growing multiple crops because of the economic resilience that agricultural diversity provides. Paul Arnold, owner of Pleasant Valley Farms, said “growing forty different

crops means we have a safety net. It's always a bad year for something" (Arnold 2017 March 19). This was a commonly echoed sentiment throughout the interviewing process, which is promising for the diversity of crops in the Capital Region and the sustainability of the local food system.

As farmers could select more than one product category, it was possible to see how many respondents selected various combinations. Comparisons were made to determine the most common combinations of product categories. Fruits and vegetables were a popular combination, as were pigs, cattle, and poultry. This indicates that many farmers prefer to grow specific combinations of products. This diversity of product categories supports the idea that agricultural diversity presents farmers with economic benefits.

Production in the Capital Region is diverse both overall and at the individual level. The diversity of local products is beneficial for consumers because provides consumers with more local alternatives, requiring fewer products to be imported from farther away. Diverse production also provides an economic safety net for farmers.

C. Diversity of Local Markets

Like product diversity, market diversity is also a crucial component of a strong local food system. The USDA report "Trends in Local and Regional Food Systems" emphasizes the economic benefits of selling locally, for both farmers and consumers. However, these benefits are highly dependent on the availability of local markets (USDA 2015). An abundance of different local selling options is beneficial for a food system because it creates more opportunities for both farmers and consumers. A lack of local markets will lead farmers to sell their products farther away (Akins 2017 April 13). The markets portion of the survey asked farmers to select where and how they sold their products (Appendix 1). These options were

that was more consistent in what t

Despite the diversity of products produced in the Capital Region and despite the wide variety of markets utilized by farmers, many Capital Region farmers believe that they do not produce enough to sell to large buyers, such as grocery stores or wholesalers. In 2012, the average farm size of Capital Region farms was 159 acres (USDA, 2012). However, the average farm size of survey respondents was 280 acres. Although, on average, our survey respondents have larger farms than the average Capital Region farm, the majority of respondents (73.1%) agree that they do not produce enough to sell to a large buyer. Despite the fact that there are several large farms within our study area, many farmers in the region do not perceive themselves as being able to meet the needs of large buyers.

This particular survey finding was also a common trend throughout our interviews with farmers in the region. Several of the farmers we interviewed explained that they cannot produce a large enough volume of consistent products to meet the standards set by many large buyers. Many of the 'Mom and Pop' stores in the region have closed, meaning that there are only a handful of companies controlling all of the grocery stores in the Capital Region. Farms in the region were capable of selling to smaller grocery stores, but can no longer keep up with the demand set by large supermarkets. During an interview, Ed Engle, owner of Engle's Acres, explained that he does not blame grocery stores for wanting a high volume of products, but he does not have the capability to meet these standards. Stores such as Price Chopper are not looking to purchase from farms that can supply only a small amount. They are looking for places that can supply "pallets and pallets and truckloads" of food (Engle 2017 February 24).

During our interviews several farmers also explained that many large buyers, especially grocery stores, require that farms have certifications, such as Good Agricultural Practices (GAP), in order to sell to them. However, third party certifications are expensive and are not done

payment. The cost of becoming a GAP certified farm is between \$300 and \$500, and the farm audit must be repeated, and paid for again, every year (Rejesus n.d.). John Betts, a regional farmer who took our survey, explained that certifications like this, along with the lack of “Mom and Pop” grocery stores and proliferation of large supermarkets, are one of the main reasons why “farmers do not market locally very much [in grocery stores]” (Betts 2017 April 13). This can be a financial burden and a deterrent from selling to grocery stores, particularly for small farmers and those for whom farming is only a secondary source of income. Many farmers in the region do not believe it is beneficial to purchase certain third party certifications when they can avoid the problem by selling through non-mainstream markets, such as farmers’ markets and roadside stands.

Several grocery stores in the Capital Region have made an effort in recent years to purchase more local food. However, during interviews with multiple grocery stores in the region, we found that this task is not as simple as it may appear. Grocery stores recognize that local farms always produce high quality products, but the lack of consistency makes it difficult to keep the shelves stocked at all times. Even stores such as Healthy Living and Four Seasons which pride themselves on selling local products, do not believe it is convenient to purchase from local farmers. Nina Lessard Goldsmith of Healthy Living explained that “buying from a distributor is easier; you only have to place one order and deliver delivery. Big distributors also offer a lot of support in terms of electronic invoicing, etc.” (Lessard Goldsmith 2017 March 9). Nina recognized that selling local products is what makes Healthy Living special, but it is more challenging than buying from one large distributor. Richard Frank, of Four Seasons, spoke of many of the same challenges associated with buying from small, local, farms. Frank describes sourcing products from local farms as “trying to fit puzzle pieces together... – [it’s] a lot of

logistics to work out” (Frank 2017 March 9). Multiple interviewees explained that local farmers can be unorganized and ~~dis~~ fashioned in terms of how they handle their invoicing, which creates an additional complication when trying to sell to grocery ~~store~~ and other large buyers.

Interestingly, nearly all the farmers who discussed their perceived inability to sell to grocery stores used similar terminology, with most describing “the system” of grocery store supply chains, and how their farms do not fit ~~in~~ into the complex supply system.

Grocery stores have made a commitment to increase the amount of local food sold in their stores. However, the current purchasing system makes it challenging for both grocery stores and farmers to meet this goal. At the

Producing crops like hay is profitable only if one has enough land to produce a sufficient quantity of it, and also requires a substantial capital investment. A hay baler can cost between \$30,000 and \$150,000 and needs to be replaced periodically (Durkee, April 22nd 2017). A new farmer, especially if farming is not their primary source of income, may not have this amount of capital to invest yet, so growing crops for animal consumption would not be practical for them.

A similar line of reasoning can be applied to the three products that nonestablished farmers are more likely to produce: vegetables, pigs and cattle, and poultry and eggs. While grains for animal consumption require a large quantity of land and capital, these three categories can be produced with relatively little investment cost and land, and have a quicker turnaround time than other categories. For instance, a new farmer who plants a field of vegetables can harvest them and make a profit during the same season, whereas if they were to plant an orchard of apple trees, it would be several years before they would be able to make a profit. Therefore, a new farmer who has not inherited their farmland from an older relative is more likely to plant vegetables, in order to make a profit quickly. Economic incentives are crucial for both established and nonestablished farmers.

The markets where the two categories of farmers sold their products were also compared. 7KHUH ZHUH WZR W\SHV RI PDUNHWV ZKHUH QHZ IDUPHUV Z and CSA shares. In the literature on local food, these two types of markets are frequently cited as rapidly growing markets for selling locally, and are praised for being direct to consumer as well. These types of markets have become much more popular in the past decade, and the numbers of nonestablished farmers in the Capital Region who sell through them indicate that the region is part of this national trend (USDA 2015). The popularity of these markets among new farmers may also indicate that farmers in the Capital Region who have recently started farming are doing

Upon taking a more in-depth look at farmers' choices and perceptions related to selling their products in the Capital Region, it becomes clear that there are several factors contributing to the strength of this food system. Primarily, it is economically beneficial to sell locally in this region, as opposed to selling elsewhere. Furthermore, it is convenient to sell locally, given the diverse array of selling options. Despite the large number of farmers who have inherited consumers from the previous generations,

consumers. That being said, there is an abundance of local food available in the Capital Region, mostly through non-mainstream channels.

While our research was fairly proportional to the number of farms in each of the eleven Capital Region counties, our survey sample results only accounted for 3.9% of farmers in the region. An extended period of study could have helped increase the number of contacts made and surveys sent out. In order to be statistically significant, the survey population would have had to reach 357 farms. Furthermore, most of the comments we received on our survey questions were in regards to the fact that the Question 10 was not as applicable to dairy farmers as there are different, stricter regulations on their products. In order to fully understand the potential for local and direct to consumer sales within the region's dairy industry, an additional study would need to be completed.

Food systems are incredibly complex, and there is always potential for further research. Additionally, the body of research on food systems is currently quite localized, and more research is needed on local food in order to broaden our understanding. When comparing the Capital Region to other regions of New York and of the country, it is important to take into account the specific traits of the Capital Region that allow its local food system to function so

VI: Acknowledgements

We would like to thank our advisor Professor Robert Turner for his constant support and advice throughout this yearlong process. He was a guiding force in our research, and a project of this undertaking would not have been possible without his support, as well as the support of many local stakeholders who helped us distribute our survey to over 1500 farms. We would also like to thank Allison Akins, Aaron Gabriel, Crystal Stewart, Kim Trombly, Renee Schoonmaker, Todd Heyn, The Durkee Family, as well as all of the farms, grocery stores, and local agricultural experts who participated in our study.

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VIII: Appendix

Appendix 1: Capital Region Farming Survey

We are studying farming in the Capital Region as part of our senior capstone project at Skidmore College. This survey takes about 3 minutes to complete, and results will be kept completely anonymous. Participants will be entered into a raffle to win a 50\$ gift card to Tractor Supply. Thank you for helping us with our project. Amanda Greenlee, Colleen Sullivan, and Jackie Knoll

1. What county is your farm located in?
 - Albany
 - Columbia
 - Fulton
 - Greene
 - Montgomery
 - Rensselaer
 - Saratoga
 - Schenectady
 - Schoharie
 - Warren
 - Washington

2. What is the approximate size of your farm in acres?

3. How long have you been farming?

4. What products do you produce on your farm? Check all that apply.
 - Grains, hay, straw, etc. for animal consumption
 - Grains, oilseeds, dry beans, and dry peas (including corn, flaxseed, rice, soybeans, etc.)
 - Vegetables, melons, and potatoes (including beets, cabbage, cantaloupes, pumpkins, squash, etc.)
 - Fruit, tree nuts, berries (including apples, blueberries, cherries, grapes, strawberries, etc.)
 - Pigs and beef
 - Milk and other dairy products
 - Poultry and eggs
 - Value-added products (including jam, pickles, etc.)
 - Others (please list all) _____

5. Approximately how many acres does this operation
Own?
Rent or lease from others, or use free?
Rent to others?

6. Where do you sell your products? Check all that apply.

- Farmers' Market
- Wholesaler
- Distributor
- School/Institution
- Restaurants
- Direct to Consumers
- Farmstand or roadside stand
- Farm Store
- Co-Op
- Community Supported Agriculture (CSA) Share
- U-Pick
- Delivery Service
- Online Marketplace
- Other (please list all.) _____

7. Approximately what percent of this food operation's products were sold...

- Within 100 miles?
- More than 100 miles, but less than 400 miles away?
- More than 400 miles away?

8. What do you do with any leftover products?

- Donate to food pantry
- Feed to farm animals
- Give to employees
- Other (please explain) _____
- I do not have any leftover products.

9. Is your farm your primary source of income? If not, approximately what percentage of your income comes from the farm?

- The farm is my primary income source.
- The farm is not my primary income source. The farm makes up the following percentage of my income: _____