Is There Farmer Interest in Food Hubs in Georgia? A Needs Assessment Survey

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Introduction

Agriculture is Georgia's largest economic sector. Even during the economic downturn, agriculture has been a bright spot for economic activity in the state, generating $12 billion in 2010, an increase of $746 million from 2009 (Wolfe and Luke-Morgan, 2011). Various economic development groups are recognizing that Georgia's agricultural sector can become an even larger economic engine creating more jobs and revitalizing rural communities.

Currently, the majority of Georgia's agricultural production is concentrated at the large-scale end of the continuum with vegetables and meats going into wholesale markets throughout the nation and the world. There is a growing, but much smaller scale production model where produce and meats are directly sold to the consumer fueled by a growing demand for locally-sourced food that exceeds supply. Missing in our current system are mid-scale farms and the infrastructure for these farms to access those wholesale and institutional markets that want local, sustainably-produced foods. Local/regional food hubs may be a way to provide this missing link (Figure 1).

Because food hubs aggregate, distribute, and sometimes process local and regional foods, they have potential to improve rural economies and quality of life through job generation, better access to fresh produce and increased viability of small- to mid-scale farms. Successful creation and implementation of food hubs requires a cross-sector effort, with leadership roles spanning academia, the public and the private sectors.

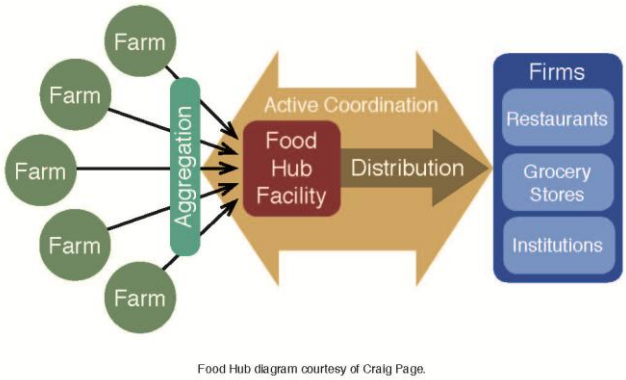


Figure 1. A diagram of a food hub illustrating the key components of aggregating products from many farms, distributing these to wholesale buyers, and actively matching supply to demand.

In the fall of 2011, the Georgia Sustainable Agriculture Consortium was formed to bring together land-grant universities with other interested academic institutions and key governmental and non-governmental stakeholders to pursue science-based information to aid the development of food hubs in Georgia. During the summer of 2012, two studies were conducted to provide data for the many groups interested in developing and supporting food hubs: a baseline survey of existing food hubs and food hub projects in Georgia, and a farmer needs assessment survey that is the subject of this report.

The baseline survey, *Food Hubs in Georgia: A Baseline Survey 2012* (Beechuk et al. 2012) found eight business operations in the state that function as food hubs. For the purpose of this study, and based on preliminary informal research, we defined food hubs as having the following characteristics:

- aggregating product from at least five farms,
- having a wholesale component to their sales, and
- working dominantly with Georgia farmers.

Of the businesses that met the food hub definition, three of these operations focused on meat products and five on small fruit/vegetable/value-added products. At the time the report was written in August 2012, 11 food hub projects were active in the state. The results indicate statewide entrepreneurial and community interest in this type of infrastructure.

Research into other types of agriculturally-based networks show that farmer interest is one of the most important facets of success (Hassanein, 1999; Trauger, 2009). The development of strong networks is facilitated when there is a mechanism through which interested parties can

find and reach out to others other likeminded producers in their region. Consequently, in addition to understanding where food hubs are located and the current activity around food hubs in the state, there was also a need to determine farmer interest in food hubs and document the production-based characteristics of these farmers. This report outlines the findings of a farmer needs assessment survey conducted during the summer of 2012. The goals of this assessment was to determine: 1) the level of farmer interest across the state, 2) farm characteristics and 3) the services and facilities farmers wanted to see in a potential food hub. This information will provide a framework for groups interested in starting food hubs and will allow the creation of an interactive map and directory to assist in the creation of a food hub or other farmer networks.

Methodology

The farmer needs assessment was conducted through a 15 question, online and hard copy survey. Appendix A gives a more detailed discussion of the methodology. Questions included the major cash crops of the farmers, farm size for small fruit and vegetable farmers, growing practices for small fruit and vegetable farmers, number of animals harvested per year for poultry, pig, small ruminant and cattle growers, how they currently market their crops, their interest in accessing wholesale markets, as well as the types of services and facilities wanted in a food hub. The survey also asked for county and zip code to determine location and also for an address and email if the respondent wished to be contacted about potential food hubs in their area.

A total of 234 useable responses were obtained, 216 of which were unique farm responses. The 234 survey responses utilized represent a very small percentage of the approximately 48,000 operating farms in Georgia (USDA, 2009). However, since the survey was designed to reach self-selected farmers interested in food-hubs, we believe the data presented adequately reflects the needs of this sub-group. In addition within the small fruit and vegetable farmer group, 21 farms reported being Certified Organic, which represents 30% of the 69 certified organic farms operating in Georgia (USDA AMS, 2012). Thirty-three farms were reported to be Certified Naturally Grown, which represents 33% of the 100 Certified Naturally Grown farms in Georgia. Consequently, we feel the survey most likely adequately represents the needs of these farmers.

Organic certification is important for fruit and vegetable producers due to the increased price point. The high cost of feed for animal producers, inhibits the production of organic meat in Georgia. Other production methods are used to capture larger profits, like grass-fed beef, free-range poultry, etc. It should be noted that while small fruit and vegetable producers can obtain

price premiums for Certified Naturally Grown when selling directly to the consumer, this advantage does not translate to wholesale.

Survey Findings

Responses were received from across the state (Figure 2). The greatest number of farmers who responded were located in a crescent running from northeast Georgia round the Athens area to south Atlanta. There were also a number of farmers responding in a corridor running along I-75. Fulton County had the greatest number of respondents (11) followed by Morgan County (8), then Bacon, Houston and Walton Counties (6 each), and Crawford, DeKalb, Irwin, and Oglethorpe Counties (5 each).

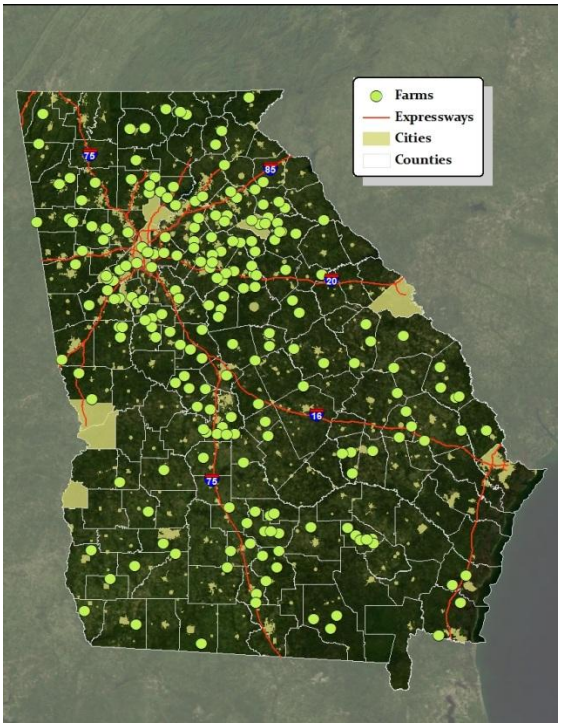


Figure 2. The locations of farmers responding to the food hub interest survey during the summer of 2012.

Farm Profiles

Seventy-two percent of the farmers indicated that small fruit and vegetables were their major crop (Table 1). Categories such as eggs, cattle, and other are the next most common crops reported. Crops listed in the other category included peanuts, corn, soybeans, pecans, peaches, wine grapes, honey, herbs, mushrooms, channel catfish, rabbits, waterfowl, canned goods, baked goods, goat milk soaps, vegetable plants, cut flowers, firewood and Christmas trees. Across all major crop categories, most farms reported one major crop (54%) or two major crops (23%).

Table 1. The major cash crops of farmers responding to the food hub interest survey. Percentages do not add up to 100% because many farmers reported more than one major crop.

	n	% Choosing
Small Fruits/Vegetables	169	72
Eggs	61	26
Poultry	26	11
Pigs	24	10
Sheep/Goats	28	12
Cattle	55	24
Other	62	27

Small Fruit and Vegetable Farmers

The majority (72%) of respondents were small fruit and vegetable farmers who were distributed across the state (Figure 3). Most (62%) of these were from small farms with less than five acres in production (Table 2). While there were larger farms (more than 50 acres) also represented, the fewest number of responses came from mid-scale farms in the 11-19 acre and 20 -50 acre categories (Table 2). The low number of mid-sized farms is most likely attributed to the lower number of mid-scale farms operating in Georgia (USDA, 2009).

Table 2. The number of acres in small fruit and vegetable production reported by famers responding to the food hub interest survey.

Acres	n	% Choosing
< 5	104	62
5 - 10	22	13
11 –19	14	8
20 - 50	10	6
>50	19	11

Small fruit and vegetable farmers were asked about their production methods (e.g. conventional, transitional, Certified Organic, Certified Naturally Grown, and other.) Twenty-six percent of the small fruit and vegetable farmers who participated in this survey used conventional production practices, 21% were in transition to Certified Organic, 20% were Certified Naturally Grown, and only 12% were Certified Organic. Many other farmers checked the other category and listed sustainable, organic but not certified, biodynamic, or biological as descriptors of their production methods. The aggregated Certified Organic and Certified Naturally Grown farmers were the largest category with 32%, and because many of the respondents that checked the other category reported using ecologically-based production practices or similar descriptors, it appears the survey dominantly reached farmers using these practices.

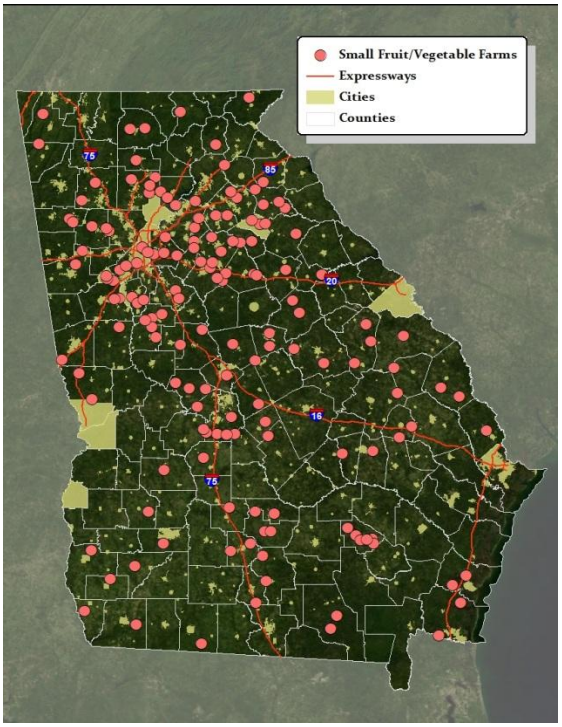


Figure 3. The locations of small fruit and vegetable farmers responding to the food hub interest survey during the summer of 2012.

Animal Producers

The animal producers who responded were scattered across the state (Figures 4-8). Producers were asked about egg, poultry, pigs, small ruminants, cattle, and dairy production. Because only 11 dairy farmers responded, we did not break this group out by major crop and these are only included in the overall results and map associated with animal growers.

There were 61 farms reporting eggs as a major crop (Table 1). The majority of these growers were located near the metro Atlanta area (Figure 4) and produced less than 50 dozen eggs per week (85%).

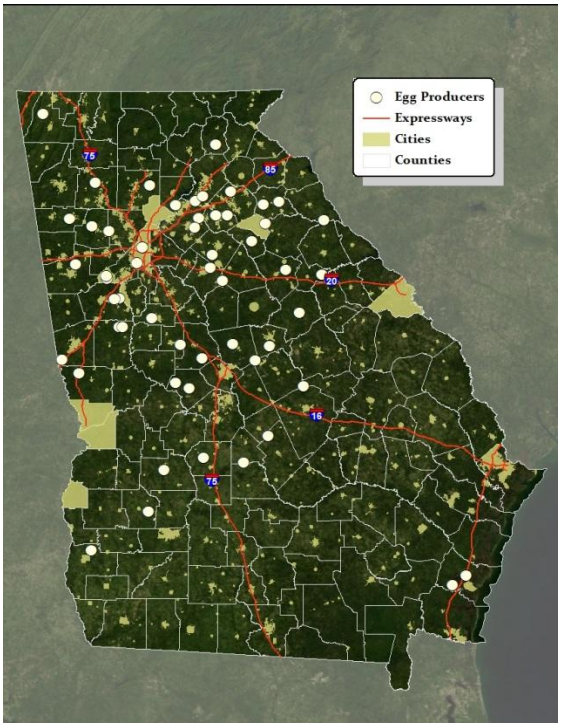


Figure 4. The locations egg producers responding to the food hub survey during the summer of 2012.

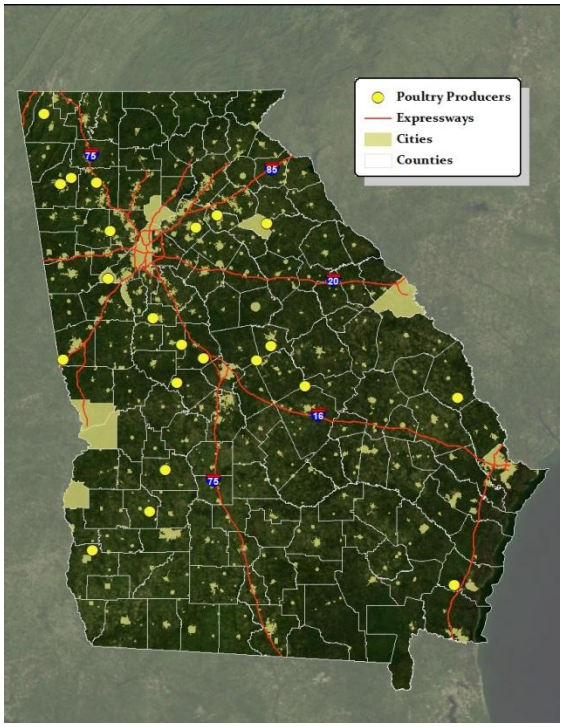


Figure 5. The locations of independent poultry producers responding to the food hub interest survey during the summer of 2012.

Relatively few farms, however, were producing meat poultry (n=27), and of these, they were scattered across the state (Figure 5). The majority (67%) of these report harvesting less than 1,000 birds per year, but approximately a quarter (22%) report harvesting between 1,000 and 10,000 birds/year. Twenty-three farmers produced pork and of these, 57% reported harvesting less than 20 pigs per year (Table 3). Twenty-eight farms produced sheep and goats as one of their major crop, most (79%) harvested less than 35 sheep and goats per year (Table 3). Pork, sheep and goat producers were also located across the state, except in north Georgia (Figure 6 and 7).

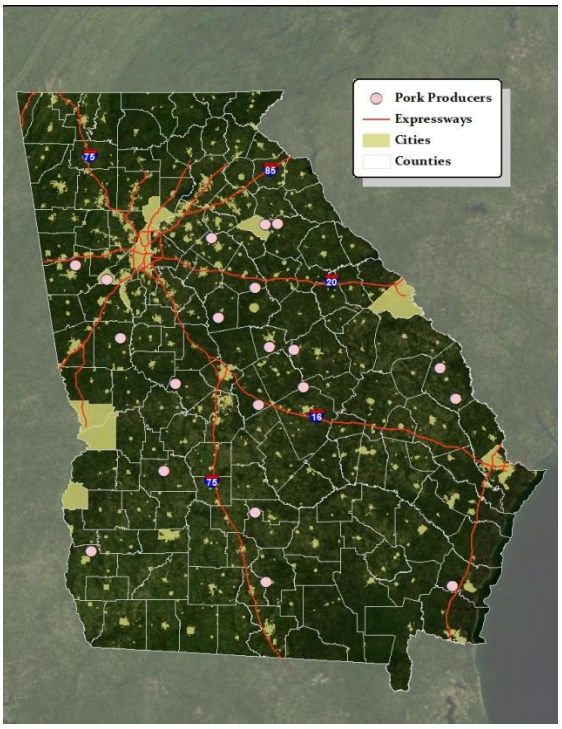


Figure 6. The locations pork producers responding to the food hub interest survey during the summer of 2012.

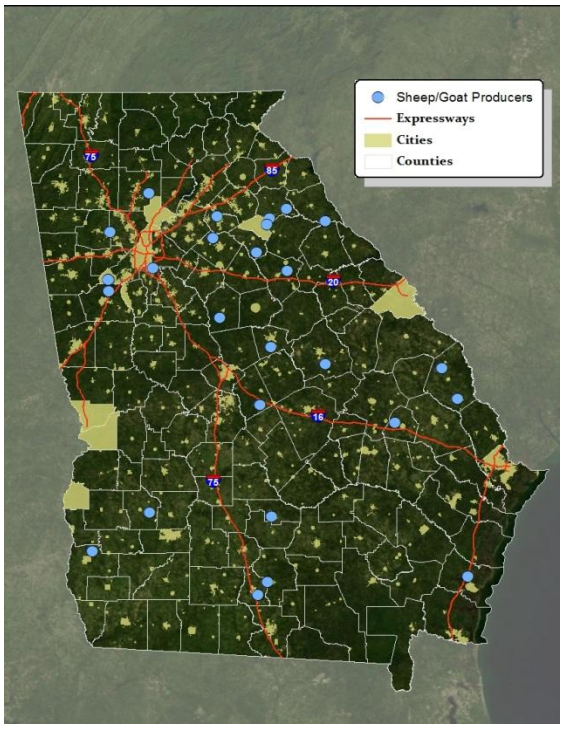


Figure 7. The locations of sheep and goat producers responding to the food hub survey during the summer of 2012.

Cattle ranchers represented a significant portion of this survey. Fifty-one cattle farms responded to the survey (Figure 8); the majority (57%) of these harvested 25 head per year or less. Another 37% harvested more than 25 and less than 100 head per year. The average herd size in Georgia is about 30 brood cows and current Extension enterprise budgets for cow-calf operations assume an 85% calf crop or 26 calves. Based on these numbers, it appears the farmers responding to the survey represent a fairly typical cattle herd size. We did not ask whether these animals were finished on-farm or out of state.

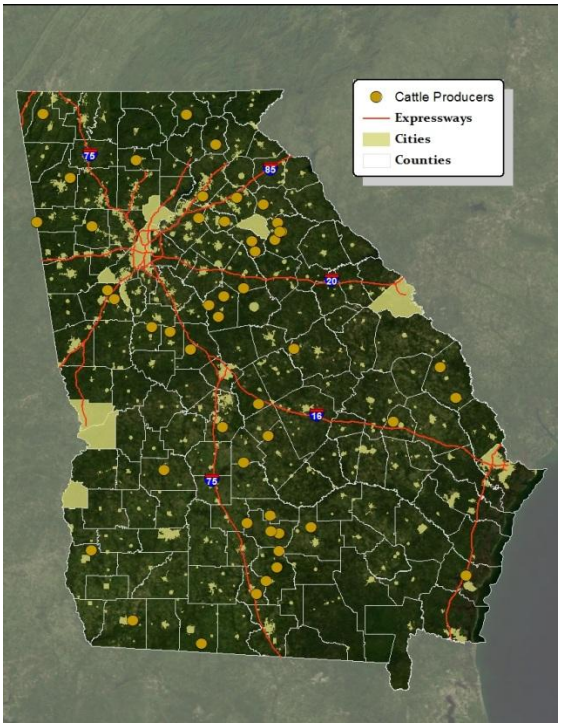


Figure 8. The locations cattle producers responding to the food hub interest survey during the summer of 2012.

Table 3. The number of animal products harvested each year reported by farmers responding to the food hub interest survey.

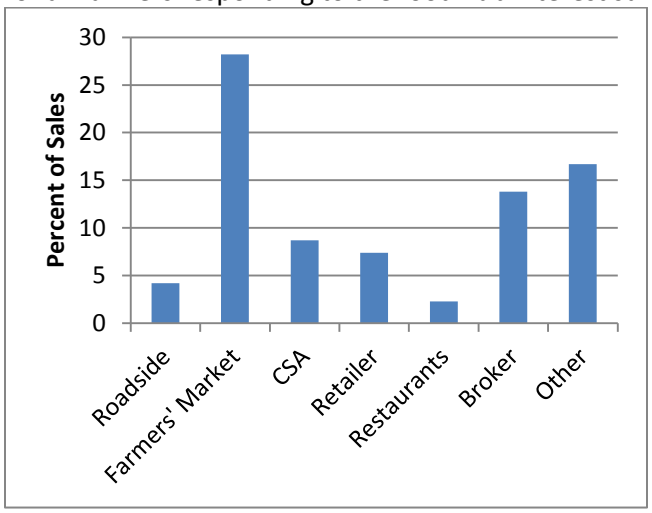
Animal Product	Number	n	% Choosing
Dozen eggs/week	<10	23	38
	10-50	28	47
	>50	10	15
Poultry harvested/year	≤1,000	18	67
	>1,000 - <10,000	6	22
	10,000 – 20,000	2	7
	>20,000	1	4
Pigs harvested/year	<20	13	57
	20-100	7	30
	>100	3	13
Sheep/goats harvested/year	<10	8	29
	10-34	14	50
	35-50	1	4
	>50	5	18
Cattle harvested/year	≤25	29	57
	>25 - <100	19	37
	>100	3	6

Farm Sales

Farmers were asked about where they marketed their crops, and reported this as the percent of their crop sold at a particular market with the total equaling one hundred. The reported percentages were low across most of the market categories; consequently, it appears that most of these farmers market through a variety of channels. Thirty-four percent of respondents sold at two markets, while an additional 34% sold at three or more markets.

We were interested in the farmers' primary market where more than 50% of their crop was sold. Most of the sales for farmers responding to the survey were directly to the consumer. Twenty-eight percent sold most of their crops through farmers' markets (Figure 9). A few (17%) of the farmers used markets other than those listed, which included on-farm sales, local buying points, stockyards, friends, pick your own operations, schools and hospitals, cooperatives, and internet sales. A number of farmers, primarily small fruit and vegetable farmers and some cattle producers, used brokers as their primary market. Another 9% marketed to community supported agriculture (CSAs). Only 2% of the respondents marketed to restaurants and 7% to retailers.

Figure 9. The primary markets (greater than 50% of sales) for all farmers responding to the food hub interest survey.



Small Fruit and Vegetables

The overall pattern and number of sales outlets reported by all farmers as direct to the consumer was similar when we looked at markets for individual crops. Among small fruits and vegetable farmers, the vast majority (n=112) reported direct sales via farmers' markets, and 47% reported they sold more than 50% of their crops in farmers' markets. These farmers used a variety of other markets: roadside stand (n= 43), CSA (n=46), restaurants (n= 45), and other

(n=48). Thirty-four of these respondents reported selling to a broker and 30 sold to retailers. Thirty-five percent had a CSAs as their primary market and 40% used other markets. Restaurant sales were surprising low; only 7% of small fruit and vegetable farmers had this as a primary market. Of the farmers that used a broker, it was the primary market for 53%. There were 34 farms that used this market, but only 19 farms that reported farming more than 50 acres. This indicates some of the smaller producers are also using brokers to market their crops.

Animal Production

Sales of eggs were largely through farmers' markets (n= 48) and other (n=26). Of farmers selling eggs at the farmers' market, this was the primary market for 48%. The other category was the primary market for only 27% of the egg farmers. Twenty-one farmers had CSAs as their primary market. There were few sales to either retailers or restaurants. Although 15 farmers reported sales to restaurants, 87% reported this was less than 25% of their total sales. Seven farmers indicated they sold to a broker. For two of these farmers, the broker was their primary market (76 to 100% of total sales). The remaining five farmers indicated this was less than 50% of their total sales.

Most poultry was marketed though farmers' markets (n=19), but roadside stands (n= 12), CSAs (n= 11), restaurants (n=10), and other (n=10) were also common choices. It appears most of these growers used a variety of markets but for 42% a farmers' market was their primary market and another 36% used CSAs as their primary market. Eight growers sold two-thirds of their birds through roadside stands. Very low numbers of birds were reported sold to retailers or restaurants.

The data for pigs were similar with 16 farmers selling at farmers markets with 56% of these reporting this was their primary market. Another 15 farmers used other markets which is most likely off-farm sales. There were very few sales to restaurants (n= 9) or retailers (n= 6). The farmers reported these markets were mostly for less than 25% of their sales. Farmers' markets (n=15) and other (n=17) were the largest market for sheep and goats. In this case, the other category is largely off-farm sales. There were very low sales to restaurants or retailers.

Farmers' markets (n=25) and other (n=24) were the two primary markets for beef. Of the farmers who sold at a farmers' market, 48% indicated this was their primary market. Again the other category appears to be primarily off-farm sales with 42% of these farmers this as a primary market. Thirteen farmers sold to restaurants and all of these sales represented less

than 25% of their total sales. Only 8 farmers sold to retailers, for 63% this was less than 10% of their sales.

Farmer Interest in Food-Hub Services and Outlets

A common characteristic of many successful food hubs across the United States is that the food hub works with their growers to match supply and demand (Leman, 2012). This requires the farmers participating in a food hub to work together and coordinate what crops each farm will grow in order to not over or under produce any one crop. Out of the 216 respondents, 209 responded to the question about whether they would be willing to work with other farmers to develop and follow recommendations on which crops or varieties to grow. Ninety-one percent of these indicated they were willing to work together on these issues.

Most of the farmers responding to the survey indicated they were interested in accessing retail (85%) or institutional markets (69%), though the interest in institutional markets was somewhat less.

The interest in increasing access to retail markets was greatest from the cattle producers (89%), followed by the other category (89%) and then eggs (88%) in terms of percentage. The lowest interest was from the 7 respondents with dairy as their major crop (70%). Although the interest was highest from cattlemen, there were only 41 farmers in this category. By far the greatest number of respondents was in the small fruit and vegetable category with 134. Of these 85% were interested in increasing access to this market.

The greatest interest in increasing access to an institutional market was from pig farmers (85%; n= 17). In most of the other categories, the interest was around 70% of the respondents. Again the greatest number of respondents were small fruit and vegetable farmers (n=116) with 73% interested in increasing access to this market.

Table 4. The interest of farmers responding to the food hub survey in increasing access to retail and institutional markets by major cash crop.

	Major Crop	n	% Yes
Retail Markets (Restaurants, Grocers, Consumer Coops)	Small fruit and vegetable	134	85
	Eggs	51	88
	Poultry	19	83
	Sheep/goats	18	75
	Pigs	18	86
	Cattle	41	89
	Other	48	89
Institutional Markets (Schools, Universities, Hospitals)	Small fruit and vegetable	116	73
	Eggs	43	73
	Poultry	17	74
	Sheep/goats	18	75
	Pigs	17	85
	Major Crop	**n**	**% Yes**
Institutional Markets (Schools, Universities, Hospitals)	Cattle	33	70
	Other	36	66

Overall, most of the respondents were interested in marketing and sales services if a food hub was formed (n= 144; 67%). Value-added processing (n= 120; 57%) and advertising (n=117; 57%) had the next highest interest. There was also fairly high interest in delivery truck (n= 95; 45%) and liability insurance (n= 80; 39%). There was relatively low interest in sorting, packing, and grading (n= 67; 34%). A similar pattern was seen when the data was broken down by major crop (Table 5).

Table 5. The priorities for major services from a food hub by major crops from interested farmers responding to the food hub survey.

Major Crop	Service	Number of Farmers Answering Yes	Priority Rank
Small Fruits and Vegetables	*Marketing/Sales*	*111*	*1*
	Value-added Processing	97	2
	Advertising	88	3
	Delivery truck	70	4
	Liability Insurance	63	5
	Sorting/Grading/Packing	53	6
Eggs	*Marketing/Sales*	*40*	*1*
	Advertising	37	2
	Value-added Processing	36	3
	Liability Insurance	33	4
	Delivery truck	29	5
	Sorting/Grading/Packing	24	6
Poultry	*Marketing/Sales*	*15*	*1*
	Value-added Processing	*15*	*1*
	Advertising	12	2
	Liability Insurance	11	3
	Delivery truck	10	4
	Sorting/Grading/Packing	9	5
Pigs	*Marketing/Sales*	*14*	*1*
	Value-added Processing	13	2
	Advertising	12	3
	Sorting/Grading/Packing	9	4
	Liability Insurance	9	4
	Delivery truck	8	5
Sheep/Goats	*Advertising*	*16*	*1*
	Marketing/Sales	15	2
	Delivery truck	11	3
	Value-added Processing	11	3
	Liability Insurance	10	4
	Sorting/Grading/Packing	9	5
Cattle	*Marketing/Sales*	*31*	*1*
	Advertising	*31*	*1*
	Value-added Processing	25	2
	Delivery truck	24	3
	Liability Insurance	23	4
	Sorting/Grading/Packing	19	5

When asked about the facilities and equipment they would like to see in a food hub, most farmers indicated cooling and refrigeration was their highest priority (n= 135, 62%). Packing containers and labels was the next highest priority (n= 116, 56%), followed by a refrigerated truck (n= 103, 49%). This pattern held true when the data was broken out by major crop (Table 6).

Table 6. The facilities and equipment interested farmers would like to see in a food hub by major crops.

Major Crop	Facilities and equipment	Number of Farmers Answering Yes	Priority Rank
Small Fruits and Vegetables	*Cooling/Refrigerated Storage*	*99*	*1*
	Packing Containers/Labels	97	2
	Refrigerated Truck	78	3
	Packing Equipment	75	4
	Non-Refrigerated Storage	21	5
	Non-Refrigerated Truck	11	6
Eggs	*Cooling/Refrigerated Storage*	*41*	*1*
	Packing Containers/Labels	38	2
	Refrigerated Truck	33	3
	Packing Equipment	28	4
	Non-Refrigerated Storage	9	5
	Non-Refrigerated Truck	9	5
Poultry	*Cooling/Refrigerated Storage*	*17*	*1*
	Refrigerated Truck	14	2
	Packing Containers/Labels	11	3
	Packing Equipment	10	4
	Non-Refrigerated Storage	4	5
	Non-Refrigerated Truck	2	6
Pigs	*Cooling/Refrigerated Storage*	*17*	*1*
	Packing Containers/Labels	11	2
	Refrigerated Truck	11	2
	Packing Equipment	9	3
	Non-Refrigerated Storage	2	4
	Non-Refrigerated Truck	1	5
	Non-Refrigerated Truck	2	6
Sheep/Goats	*Cooling/Refrigerated Storage*	*20*	*1*
	Refrigerated Truck	12	2
	Packing Containers/Labels	11	3
	Packing Equipment	7	4
	Non-Refrigerated Storage	3	5
Sheep/Goats	Non-Refrigerated Truck	2	6
Cattle	*Cooling/Refrigerated Storage*	*36*	*1*
	Refrigerated Truck	28	2
	Packing Containers/Labels	22	3
	Packing Equipment	21	4
	Non-Refrigerated Truck	5	5
	Non-Refrigerated Storage	2	6

Discussion and Conclusions

The needs assessment survey indicated widespread interest in food hubs across the state, particularly from smaller farms that tend to have niche markets and sell directly to the consumer. This survey also highlights some of the obstacles and barriers farmers may face as they begin to move toward a food hub model of production and sales.

The location of farms that are interested in food hubs is simultaneously a benefit and impediment to food hub formation in Georgia. There were two primary regions with a large amount of interest. The greatest numbers of interested farms are clustered around the northeast Georgia to south Atlanta area. This region benefits from a high consumer population density that could support multiple enterprises. The food hub baseline survey indicates there are several operations that function as food hubs in this geographic region as well as several food hub projects. Further research in this region needs to be conducted to determine how many of these food hubs can be sustained.

In addition, there was interest in some southern and central Georgia counties, particularly those along the I-75 corridor. This orientation to I-75 could assist food hubs interested in serving urban centers across the state. The limited interest of farmers in rural areas more removed from urban centers may be due to several factors. The survey tended to reach small farms that specialize in ecologically-based production practices. These types of farms tend to be located either near urban centers where they can market their products or within specific rural regions where there exists a large concentration of farmers who use similar practices (DeLind, 1999; Lang, 2010; Stephenson, 2004). The lack of rural farmer participation may also be due to a lack of awareness about the increasing interest in local food in urban centers and this potential market.

The greatest opportunity for food hubs appears to be with small fruit and vegetable production. If this survey is representative of interested farmers in the state, there does not seem to be enough Certified Organic farms to support a Certified Organic food hub. Although most of the small fruit and vegetable farmers that responded appear to be using some form of ecological production methods, most of the respondents were not Certified Organic. Organic certification may not be critical for these farmers to receive a price premium when selling directly to the consumer; however, it will be necessary to receive this price premium in the wholesale market. There may be an opportunity for a dual use food hub that can handle both conventionally-grown and Certified Organic produce.

We also found that some of the small fruit and vegetable farmers responding to the survey are already using brokers to market their crops. These included smaller farms of less than 20 acres. Because these farmers already have experience with a wholesale market, they might be more inclined to participate in a food hub.

The substantial number of farms producing eggs may represent a business opportunity; however, finding a single aggregation point that will serve these growers may be difficult due to the location of interested egg producers across the state. An egg aggregation facility would likely need some special equipment for candling and washing, but might be able to be located with a small fruit and vegetable facility. Likewise, there was also a large response from farms

that produced a wide variety of other products such as honey, goat soap, and wine grapes. There is no reason that a small fruit and vegetable aggregation distribution center could not handle some of these products.

This research showed a high level of interest in having meat processing facilities organized as food hubs. Capital costs for meat processing facilities are high and can cost well over $1 million including land, building, equipment, and operating costs. However, studies indicate in regions where there exists a strong demand for local food, these facilities can be economically feasible (Mills, 2012; Wolfe, 2009). A food hub based around a meat processing facility that includes sales, marketing and transportation components has the potential to justify this type of custom processer. One difficulty could be getting producers to use similar production practices to produce a brand-able, consistent product.

Of the meat producers, the greatest interest was from cattlemen. The two geographic areas with the most interest were concentrated in an around that surrounds Athens and runs to the south of Atlanta and another cluster in south Georgia along I-75. Cattle producers in several parts of the state have evaluated and are in the process of evaluating the feasibility of building harvesting and processing facilities that can be USDA or state inspected. These reports can be found at the Center for Agribusiness and Rural Economic Development website - http://www.caes.uga.edu/center/caed/pubs/feasibility.html.

There should be an incentive for small-scale poultry producers to form a food hub. Small-scale poultry producers face a special challenge because there are currently no independent poultry processing facilities in Georgia. The Georgia Department of Agriculture regulations allow on-farm processing of less than 1,000 birds per year. Independent poultry producers have indicated it is difficult to make a living on this number of birds. If a poultry processing facility were available, there might be other growers interested in this niche market. If a poultry food hub was established, these smaller scale producers could benefit by being able to increase production and entering into new markets through combined sales.

Most farmers were interested in a food hub for help with marketing and sales. Cooling and refrigerated storage was the most critical equipment need identified. There was also interest in value-added processing from most major crop groups but particularly from small fruit and vegetable farmers. This seems to be a critical need particularly for access to institutional sales since many small fruit and vegetable crops are in season when schools and universities have lower demand. A recent proof of concept study by the Georgia Tech Research Institute indicated that a food processing cooperative facility could be economically feasible (McMurray et al. 2012).

There was strong interest in increasing sales to retail markets such as restaurants, groceries, and consumer cooperatives. There was slightly less interest in institutional sales. Although we do not have data to indicate why this is so, personal communication with farmers across the state indicates that this may be due to a perception of lower prices from school lunch programs or universities. As institutions such as schools and hospitals may be an important target for food hub products, more research needs to be conducted among specific districts and in interested locations to determine feasibility.

Numerous conversations with small-scale farmers in the state emphasize the fact that price point in general is a critical concern, as their survival hinges on their ability to capture the higher prices gained through direct consumer sales. However, they recognize that diversifying their market and including some wholesale outlets may be beneficial for the long-term economic sustainability of their farms. A tool for farmers to be able to evaluate the right mix of markets for their operations would be valuable. Such a tool should help the farmer account for the amount of time spent in direct marketing and whether shifting this time to production could offset the lower prices from wholesale markets.

Finally, and most encouraging for the possibility of food hubs in the state, over 90% of the farmers indicated they were willing to work together and could foresee the likelihood of coordinating their production for a whole-sale market. This ability to work as a unit to match supply and demand needs is a common characteristic of existing successful food hubs as it helps stabilize prices and offers the consumer more consistent availability.

In summary, our data indicates strong interest in this type of infrastructure by small and mid-scale farms in Georgia. This data is meant to provide an overview and point to regions where a considerable farmer interest may lie. A food hub project would have to conduct a more detailed study including farmer outreach in their area to determine particular interests and needs. Although, these farmers indicated interest and a willingness to work together, the devil is always in the details, and the particulars of services provided, prices, and other details will determine how many farmers decide to participate in a specific project.

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APPENDIX A - Methodology

The farmer needs assessment was conducted through a 15 question, online and hard copy survey (see below). Because this survey was conducted for the expressed purpose of aiding in the creation of food hubs, we eliminated demographic questions typically included in research-based surveys. In the survey's preface, we clearly defined a food hub and its functions, per our definition above, and stated the primary goal, to determine the level of interest in forming a food hub in the area and to share that information for the purpose of linking interested farmers. Questions included the major cash crops of the farmers, farm size for small fruit and vegetable farmers, growing practices for small fruit and vegetable farmers, number of animals harvested per year for poultry, pig, small ruminant and cattle growers, how they currently market their crops, their interest in accessing wholesale markets, as well as the types of services and facilities wanted in a food hub. The survey also asked for county and zip code to determine location and also for an address and email if the respondent wished to be contacted about potential food hubs in their area. The responses were mapped as close to location as possible in the county. If farmers did not give an address, a location dot was put in the county, but it does not represent an exact farm position.

The on-line version was administered by the University of Georgia's Survey Center. A hard copy version was developed to reach farmers who did not have access to computers. The hard copy surveys were designed to be mailed in or dropped off at the local county Extension office. The survey was advertised through several different avenues including: the Georgia Sustainable Agriculture Consortium email list, the College of Agricultural and Environmental Sciences Sustainable Agriculture email list, Georgia Organics farmer email list and Growers News, the Georgia Department of Agriculture's Market Bulletin, The Georgia Farm Bureau's Leadership Alert, and the Georgia Fruit and Vegetable Farmers newsletter. In addition, both University of Georgia and Fort Valley State University county extension agents were asked by email to contact growers in their area and encourage them to participate. This was followed by a telephone call reminder.

Both electronic and hard copy surveys were tabulated by the Survey Center and results were calculated in SPSS.

A total of 234 useable responses were obtained after data from non-farmers and farms not producing direct food crops were removed, 216 of which were unique farm responses and is therefore the sample we draw from in the findings section. Due in part to the wide dissemination of this survey through multiple channels or a misinterpretation of the survey structure, we found duplicate entries from single farms that were identified by the farm name

or address. Most of these survey responses, however, had different answers and so were retained. The majority of different answers were in response to the different crops produced on the farm. We feel in these cases, the respondent restarted the survey to answer questions about a different production system.

Another explanation for multiple entries could be due changing conditions on the farm that prompted a farmer to resubmit a survey. In a few cases, two different people from the same farm filled out the survey at different times. Because we did not always have the time or information needed to re-contact people for follow up, we retained answers as they were. In addition, four farms that responded did not give any location information; consequently these were not included in the accompanying maps.

The maps used in this report identify the location of cities with shading. There were several cities that were also consolidated with their county for joint government representation, thus the entire county is shaded. Georgetown, in Southwest Georgia is an example of this city-county consolidation. Quitman County and the city of Georgetown are consolidated, so the entire county is shaded to locate Georgetown.