

NORTHEAST GEORGIA REGIONAL FOOD NETWORK ANALYSIS

by

MARC PATRIC BEECHUK

(Under the Direction of Rosanna Rivero)

ABSTRACT

This paper explores the current operations, related industries and policies affecting the agricultural practices in the Regional Commission district of Northeast Georgia. It specifically focuses on the production, infrastructure, consumption and regulations that are in place as well as what can be improved to promote agricultural practices for the region. Farming is important in Georgia and to build stronger communities it is necessary to protect resources in place, find ways to keep money moving through local economies and guide the industry as it evolves. Industrial agriculture has changed the way America farms and it is important for operators to understand their roles and maximize the opportunities available whether they have five acres or 500,000.

INDEX WORDS: Agriculture, Alternative Food Systems, Distribution, Food Hubs, Food Systems, Infrastructure, Land Use, Northeast Georgia, Policy, Regional Planning

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DEDICATION

I would like to dedicate this to everyone working for the production of our food. If you grow it, pick it, process it, transport it or eat it you should understand the system and effects of those actions as they work on your body, our environment and the World. May no belly be hungry by the time I die.

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Thank you to the world for providing so many resources and obstacles to keep us all going forward. Without knowledge, great friends and food we would just be sitting around waiting for life to happen, fortunately we can turn those opportunities into amazing creations. To life and all its bounty!

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS.....	v
LIST OF TABLES.....	vii
LIST OF FIGURES.....	ix
CHAPTER	
1 Introduction.....	1
Section 1: Introduction.....	1
Section 2: Methodology.....	6
2 Production.....	8
Section 1: Farmers.....	10
Section 2: Farms and Acreage.....	12
Section 3: Production.....	14
Section 3.1: Poultry.....	15
Section 3.2: Livestock and Aquaculture.....	17
Section 3.3: Vegetables, Fruits and Tree Nuts.....	19
Section 4: Soils.....	22
Section 5: Conclusion.....	23
3 Infrastructure.....	25
Section 1: Distribution Markets.....	26
Section 2: Shipping.....	33

	Section 3: Resources.....	36
	Section 4: Disposal.....	38
4	Consumption.....	42
	Section 1: Consumer Food Habits.....	42
	Section 2: Where Food Dollars Go.....	44
	Section 3: Food Access.....	47
	Section 4: Consumer Resources.....	50
	Section 5: Obesity.....	51
5	Policy.....	53
	Section 1: Federal Policy.....	53
	Section 2: Northeast Georgia Plans.....	55
	Section 3: Positive Regulations for Agriculture.....	58
6	Conclusion.....	62
	Section 2: Further Aspects to Research and Analyze.....	68
APPENDICES.....		71
A	Glossary.....	71
B	Farms Types.....	76
C	Food Hub Case Study: Eastern Carolina Organics.....	79
D	Food Distributors in the Region.....	81
E	Georgia Food Hub Matrix: Operations and Projects.....	86
F	Model Right-to-Farm Legislation.....	89

G	Regional Population Growth by Decade.....	94
REFERENCES.....		95

LIST OF TABLES

	Page
Table 1.1: United States National Farm Statistics.....	3
Table 2.1: State and Region Farm Gate Values.....	9
Table 2.2: Age of Georgia Farmers.....	10
Table 2.3: Farmer Demographics in Georgia.....	10
Table 2.4: Farm Acreage Northeast Georgia 2007.....	11
Table 2.5: Operations by Economic Class 2007.....	13
Table 2.6: Farm Gate Value 2010.....	14
Table 2.7: Poultry Farm Gate Value 2010.....	15
Table 2.8: Livestock and Aquaculture Farm Gate Value 2010.....	17
Table 2.9: Fruit and Nut Farm Gate Value 2010.....	19
Table 2.10: Vegetable Farm Gate Value 2010.....	21
Table 3.1: Wholesale, Transportation and Warehousing.....	28
Table 3.2: Distances from County Seats to Ports.....	34
Table 3.3: Air Cargo Tonnage.....	35
Table 4.1: Consumer Expenditure Data 2011.....	44

LIST OF FIGURES

	Page
Figure 1.1: Northeast Georgia Region Context Map.....	1
Figure 2.1: State and Region Farm Gate Values.....	9
Figure 2.2: Region Broiler Production.....	15
Figure 2.3: Top 10 Counties for Poultry Production 2010.....	16
Figure 2.4: Top 10 Counties for Livestock Production 2010.....	18
Figure 2.5: Top 10 Counties for Fruit and Nut Production 2010.....	20
Figure 2.6: Top 10 Counties for Vegetable Production 2010.....	21
Figure 2.7: Soil Zones in Georgia.....	22
Figure 3.1: State Farmers Markets.....	25
Figure 3.2: Regional Farmers Markets.....	26
Figure 3.3: Transportation in the Region.....	29
Figure 3.4: Food Hubs and Food Hub Projects 2012.....	30
Figure 3.5: 10 and 50 mile Range of Food Hub Projects.....	31
Figure 3.6: Counties with Farm-to-School Programs.....	32
Figure 3.7: Georgia Ports and Passengers.....	33
Figure 4.1: Who Gets Your Food Dollars.....	45
Figure 4.2: Where does a Food Dollar Go?.....	46
Figure 4.3: Food Deserts, Income and Groceries.....	48

Figure 6.1: Areas for future Agriculture and Water Services.....62

CHAPTER 1

Introduction

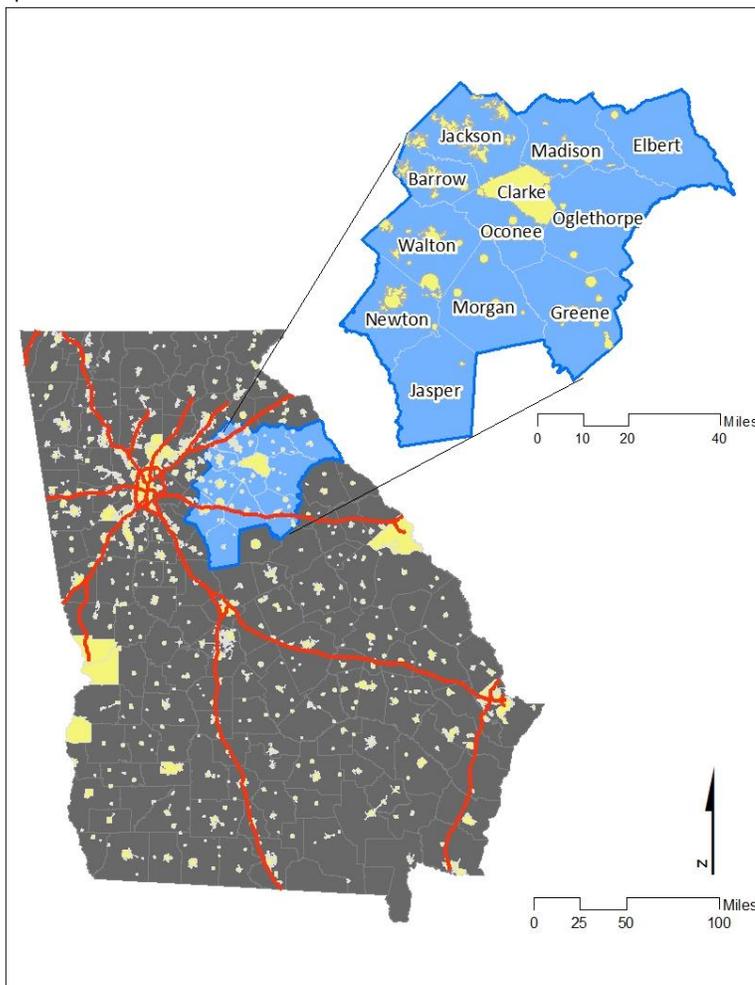
Section 1: Introduction

The modern food system is composed of many parts producing, processing, transporting, serving, selling, consuming and disposing of the raw products that

Americans and many others grow. It has

grown immensely during the industrial era due to technological and biological advancements. The system operates on a global scale, yet is made up of individual inputs that affect and influence issues of planning, economic development, education, policy and health at a more localized level. Many jurisdictions are now looking for ways to redefine the system at that

Figure 1.1
Northeast Georgia Region Context Map



Data Source: NEGRC GIS Department

regional scale in order to provide more jobs, economic benefits and healthy options to their citizens. This paper will delve into the strengths and opportunities for the Northeast Georgia Region (*Figure 1.1*) in order to determine how they can keep the money flowing throughout the area to influence positive development for farmers, processors, shippers and consumers. It will seek to identify and analyze national and regional trends as well propose areas to be addressed by local and regional planning bodies in these areas:

- 1. Production- as it relates to regional strengths and opportunities**
- 2. Infrastructure- how regional products are distributed and the potential role of food hubs**
- 3. Consumption- national trends, local resources and deficiencies**
- 4. Policy- what happens nationally and how the region's comprehensive plans benefit the agricultural industry**

The Northeast Georgia Region is one of the ten statewide regional commissions (*see Glossary*) in Georgia. It is made up of Barrow, Clarke, Elbert, Greene, Jackson, Jasper, Madison, Morgan, Newton, Oconee, Oglethorpe and Walton Counties. This area spans from the southern Appalachian Mountains down to almost the southern edge of the Georgia Piedmont, east to South Carolina and west the Atlanta Metropolitan Area. The change in land type allows for many different operations to take place in the region and its proximity to Atlanta makes it a favorable area for development.

The American food system is a large part of our national economy with over 2.2 million farms creating \$418 billion¹ of production value in 2011. Those numbers are large, but when you begin to look at farms a more complex picture appears. Sixty percent of all farms report sales under \$10,000 (*see Appendix 2: Farm Types*) and only 10% of the 2.2 million show a profit. 1.2 million principal operators (*see Glossary*) report off-farm income which is up to 65% of all farmers in 2007. While the number of farms has grown recently it is still well below our historical highs in the early 1900's

(*Table 1.1*). During that same time farms have expanded and become more specialized with many of the largest operations often

being monocultures. Farms were run by over 3.3 million operatorsⁱⁱ in 2007 and employed another 1,032,000 workersⁱⁱⁱ. These

numbers include second and third operators (often younger family members), operators who have to work off-farm for extra income, workers who are not full-time at any one operation and the large amounts of undocumented workers.

Off-farm work includes farmers who work at other farm-related jobs as well as people who

work in non-farming jobs, but operate part of their property as a farm too. The data indicates that mechanization and technology have freed farmers to pursue alternative revenue streams and not necessarily have to watch constantly over their operation. It also reflects the fact that entire families no longer run farms with some members taking different work and contributing back to their families.

The gender and racial characteristics of farmers has diversified in recent years, but of the 2.2 million operations, 1.83^{iv} million had white males as their principal operator. Female operators saw the biggest increase of any group and now run over 300,000 farms in the US. As farms diversify their operators are also getting older, the average farmer is now over 57 years old and the number of operators 75 or older grew

Table 1.1
United States National Farm Statistics

Year	# of Farms	# of Acres (1,000's)
1850	1,449,073	293,561
1870	2,659,985	407,735
1890	4,564,641	623,219
1910	6,406,200	878,798
1930	6,545,600	986,771
1950	5,647,800	1,202,019
1970	2,949,140	1,102,371
1990	2,145,820	986,850
2010	2,192,000	918,840

Data Source: Farms, Land in Farms, and Livestock Operations 2011 Summary: Released February 2012, by the National Agricultural Statistics Service (NASS), U.S. Department of Agriculture. <http://www.nass.usdagov/>

20%. The younger generation is not filling the gap as the amount of farmers under 25 shrunk by 30%.

Production in Northeast Georgia is robust in the categories of poultry, livestock and aquaculture while also increasingly diversified in fruit and vegetables. The region has seen growth in its share of overall state agricultural acreage, but slight declines in its total acres farmed. Diversity in production throughout the region is an important trait for local food operations to reach economic viability. Regional food systems are not going to take the place of conventional production in the near future, but their success can be greatly improved by offering a range of products.

An additional trend is the increase in alternative farming, which often occurs on smaller farms. The sizes do vary, but using biological processes in place of chemicals can limit a farmer's scale. The data is positive for organic farming (one sector that is well followed) which in 2007 reached 4,289,957 acres of production with just over 50% of that figure coming from crops and the rest in pasture or rangeland^v.

Alternative farming includes certified organic, which is found in the large broker/distributor/grocer system and is produced globally. It also includes certified naturally grown, biodynamic, chemical-free farms, heritage breed livestock and poultry, protected harvest and locally grown (*see Glossary*). In the Southeast, all these alternative production systems tend to feed into regional or local distribution networks that cater to higher end groceries, restaurants, farmer's markets and direct-to-consumer sales^{vi}. These avenues have seen increased consumption, especially when offering diversity in products over the past years and offer new opportunities to smaller and localized farms^{vii}. Big

organic producers have led the push in the alternative market with over \$30 billion of sales in 2011^{viii}.

Atlanta is the major hub for the Southeastern United States and provides connections for products, people and knowledge to the rest of the country and beyond. The Northeast Georgia Region includes two Interstates (I-85 & I-20), major rail lines, vast open space and an incredible educational resource in the University of Georgia (UGA). It is home to 574,047 people as of the 2010 census which is an increase of 31% from 2000. The region has also embraced the potential for Food Hubs to aggregate local products to utilize economies of scale in supplying the broader market and hopefully the many institutions. As this concept gains traction it will be important for facility operators to keep the focus on community health and maximize the regional economic impact that such a business can produce.

Consumers are a key player in the food system and have helped to spur many changes over the years to the food we all eat. As food has evolved for flavor or nutrient demands the industry has also brought about more processing, meals to eat on-the-go and technology that seeks to revolutionize many natural products. Getting education to the consumers and quality scientific research from our laboratories are areas we need to continue improving in order for the food system to benefit the land, resources and end user.

Consumption, biotechnology, safety, land development and production are issues being addressed by policymakers. It is important that those decisions are influenced by accurate information because they can foster intelligent growth, aid underserved or undereducated people, protect environmental resources (prime agricultural land, water

and habitats) and provide safe products to be consumed. Policy needs to better understand how farms are evolving, what steps can be enacted to preserve land into the future and feed our population. The region can focus on urban growth in order to preserve rural land, empower farmers through Right-to-Farm legislation, educate people about food production or preparation and encourage good business models for regional food systems. Policy issues can become battles, but when it comes to feeding your population and gaining economic power, the region needs to focus on its strengths and build for a hungrier tomorrow.

The goal of this report is to inform policymakers of the strengths and opportunities that exist for agriculture in Northeast Georgia. All information should be understood as research and needs to be reexamined as this region grows and as new data such as the 2012 Census of Agriculture are published.

Section 2: Methodology

This report focuses on the Northeast Georgia Region food system as it relates to the state and the nation. Most of the statistics used are from the 2007 Census of Agriculture which is conducted by the USDA's National Agricultural Statistics Service (NASS). This census is completed every 5 years. New data from 2012 should be published soon. This resource was supplemented with data from the USDA Economic Research Service, the University of Georgia's College of Agriculture and Environmental Science, the Georgia Food Policy Council, the Appalachian Sustainable Agriculture Project and a variety of other government sources. Georgia has a statewide economic

development department with a branch that focuses on agriculture and provides information on statewide figures, available facilities and information on revenue assistance. Much of the policy work is pulled directly from county comprehensive plans, USDA national publications or programs and the Camden County Farmland Preservation Plan which was prepared by the Delaware Valley Regional Planning Commission^{ix}.

Geographic Information Systems (GIS) was used to display and analyze tabular data. This has been a combined effort on my part with assistance from the Northeast Georgia Regional Commission. GIS allows visualization of how the different inputs relate to one another and where spatial advantages exist in order to provide the best service going forward. It also allows the reader to better visualize how a region can be impacted by different scenarios. Its analysis and capabilities also can be utilized to show how the different inputs relate to one another and where spatial advantages exist in order to provide the best service.

Finally, I conducted interviews and surveys to tell the story of how Georgia's Northeast Region is impacted by Agriculture.

CHAPTER 2

Production

Agricultural production begins with natural resources, is impacted by humans and technology until final harvesting brings those products to consumers. American farms have expanded in size and increased in use of synthetic inputs while also decreasing in overall numbers since the 1950's. The demographics have shifted along with the other changes in farms to currently being operated by more women and minorities, but also an ever aging subset of the American workforce. These trends reflect the changing nature of our national population and policies as well as the increased vertical integration of industries since petroleum took such a hold in the early 1900's. American farms are some of the most efficient in the world, yet rarely offer financial security from production that other industries are afforded^x. They also continue to be a source of environmental problems and driver of our ever-more globalized society^{xi}. The changes and challenges that exist provide many opportunities for this industry and the region's that thrive off of their production.

The agricultural industry supplies 1 in 7 jobs in Georgia. The poultry industry has the largest impact in the state, but Georgia grows a wide range of crops. These can be grouped into three categories:

- **Field crops** (wheat, rice, corn, soybeans, barley, dry beans, rye, sorghum, cotton, popcorn, tobacco, or other such crops)
- **Other crops** (vegetables, melons, berry crops, grapes, tree nuts, citrus fruits, deciduous tree fruits, avocados, dates, figs, olives, nursery, or greenhouse crops. This category also includes farms producing potatoes, sugar crops, hay, peanuts, hops, mint, and maple syrup)

- **Livestock or Poultry** (cattle, hogs, sheep, goats, milk, chickens, eggs, turkeys, or animal specialties such as furs, fish, honey, etc.)

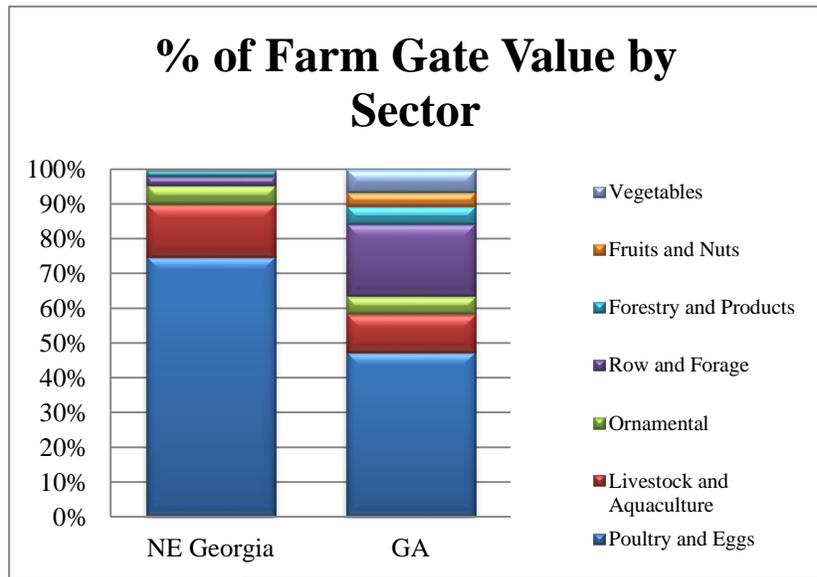
Table 2.1
State and Region Farm Gate Values

	NE Georgia	GA	NE GA % of GA	NE GA Top 10 counties
Poultry and Eggs	\$1,062,380,222	\$5,387,694,561	19.72%	Madison (3), Jackson (5)
Livestock and Aquaculture	\$218,301,733	\$1,248,599,742	17.48%	Oglethorpe (1), Morgan (3), Greene (6)
Ornamental	\$74,417,780	\$586,030,980	12.70%	Oconee (6), Jasper (8)
Row and Forage	\$37,451,520	\$2,358,818,307	1.59%	
Forestry and Products	\$24,308,999	\$577,137,865	4.21%	
Fruits and Nuts	\$2,588,864	\$450,718,027	0.57%	
Vegetables	\$1,829,575	\$752,831,559	0.24%	

Data Source: Georgia Farm Gate Report 2010, UGA CAES

Figure 2.1
State and Region Farm Gate Values

The 2010 Georgia Farm Gate Value Report^{xii} from the University of Georgia’s College of Agricultural and Environmental Sciences breaks down categories



Data Source: UGA CAES Farm Gate Report 2010

further to show specific sectors (**Table 2.1**). The total figures for the region show more production coming from the poultry, livestock and aquaculture sectors as a percentage than the state produces (**Figure 2.1**).

Georgia as a whole has a more diverse production getting over 25% from the vegetable and row and forage sectors which account for less than 5% of Northeast Georgia combined.

Section 1: Farmers

The age of farmers in Georgia is on the rise and reflects a long trend in the United States of farmers on average being older than average heads of households. Georgia’s average age of principal operating farmers is around 56 which is 2 years younger than the national average^{xiii}.

More than half the state’s farmers are over 55 years old and 79% are 45 or older (*Table 2.2*). The age of farmers reflects

*Table 2.2
Age of Georgia Farmers 2007*

Farmer Age	Number	Percentage		Aging Share
Less than 25	982	1.44%		100%
25-34	3,819	5.60%	25+	98.56%
35-44	9,587	14.05%	35+	92.96%
45-54	17,146	25.13%	45+	78.92%
55-64	18,702	27.41%	55+	53.79%
65-74	12,083	17.71%	65+	26.38%
75+	5,913	8.67%		
	68,232			

Data Source: USDA 2007 Census of Agriculture

America’s aging population, but unlike overall figures the agricultural sector is not replenishing the younger ranks fast enough. Active younger farmers also tend to be associated with the large industrial farms or small alternative farms, the two growing subsets.

*Table 2.3
Farmer Demographics in Georgia 2007*

Primary Occupation	27,474
Secondary Occupation	40,758
Total	68,232
Live On Farm	53,212
Live Off Farm	15,020
	68,232

Data Source: USDA 2007 Census of Agriculture

Farmers fall into a variety of categories based on their operation's sales, resources and management organization. They are also broken down by whether farming is the primary occupation of the household and if the operators live on the farm or not (*Table 2.3*). The table shows how farming as a profession has changed in modern times as well as how hard it is to make a living on small and mid-sized farms. The USDA Economic Research Service reported in 2007 that more 65% of farmers take off-farm work to

supplement their agricultural income which

Table 2.4
Farm Acreage Northeast Georgia 2007

	1997 acres operated	2002 acres operated	2007 acres operated	op (1-49) acres	op (50-499) acres	op (500+) acres	Operations
Barrow	46214	36092	33,862	307	152	7	466
Clarke	14138	14121	10,457	67	46	3	116
Elbert	60462	63429	62,915	193	291	23	507
Greene	52696	52242	55,334	76	138	33	247
Jackson	84063	99554	84,869	493	370	29	892
Jasper	53529	50927	56,414	135	178	20	333
Madison	76135	76458	76,499	382	374	15	771
Morgan	92248	89191	92,433	261	364	32	657
Newton	48968	44839	38,534	179	110	17	306
Oconee	53483	54077	48,778	198	204	18	420
Oglethorpe	64529	56142	86,640	194	240	43	477
Walton	67454	66136	53,696	256	216	18	490
	713919	703208	700,431	2741	2683	258	5682
NEG% of GA	6.33%	6.54%	6.90%	13.88%	11.33%	5.83%	11.88%
Georgia	11,262,838	10,744,239	10,150,539	19,747	23,676	4,423	47,846

Data Source: NASS Census of Agriculture 2007

is up from 27% in 1945^{xiv}. Some of that work may pertain to farming such as agro-tourism or food processing, but it also involves jobs away from the land such as being a mechanic, tailor or operating a paper shredding business^{xv}. Twenty eight percent of the farmers in Georgia live off-farm (*Table 2.3*). This reflects the amount of farmworkers

living off-farm and the shift away from romanticized notions of family farms that are often portrayed as icons of the agricultural industry. It is also a sign of the business orientation of farms that can be healthy for production and economic impact.

Section 2: Farms and Acreage

Nationally recent trends have seen consolidation into large farms at the one extreme as well as a growth of small farms by younger farmers on the other end of the spectrum^{xvi}. Farms have also seen increased efficiency over the years from 27.5 acres/worker in the late 1800's to 740 acres/worker in the 1990's which has accounted for a decrease in farm operations and workers^{xvii}. Farmed acreage in the Northeast Georgia region has decreased since 1997, but at a slower rate than Georgia as a whole. The region represented 6.33% of farm acreage in 1997, but now is up to 6.9% (**Table 2.4**). The decrease was greater between 1997 and 2002 than from 2002 to 2007 in Northeast Georgia which is a positive trend for the region.

The acreage of farms is a consistently changing picture across the United States and Georgia. Efficiency and consolidation have led to fewer farms on fewer acres growing more products for an expanding population in the industrial agriculture sector. At the same time we have seen moderate growth in small farms earning \$10,000-99,999, especially ones providing products through more localized distribution streams such as farmer's markets, food hubs or Community Supported Agriculture (CSA) programs^{xviii}.

Northeast Georgia in general has smaller farms than South Georgia or the Midwest. The region has almost 50% of its farms in production under 50 acres with less than 5% over 500 acres (**Table 2.5**). Morgan County leads the region with 92,433 acres

of production, but is third in terms of farm operations (individual farm units); Jackson County has the greatest number of farms with 892 operations. In terms of animal production the region has many poultry farms (requiring less space) and operations that deal with larger livestock such as cattle and pork. Poultry farms are the dominant type in the region, but those farms do also raise cattle and hogs. They have the advantage of using the litter to fertilize pastureland and hayfields. Northeast Georgia also focuses more on fruit and nut production than field crops.

Table 2.5
Operations by Economic Class 2011

		\$1,000-9,999	\$10,000-99,999	\$100,000-249,999	\$250,000-499,999	\$500,000+
US	2010	1,227,200	592,420	147,290	98,980	126,110
	2011	1,200,550	600,350	145,640	100,890	133,570
		-2.2%	1.3%	-1.1%	1.9%	5.9%
Georgia	2010	29,700	10,000	2,300	1,600	3,800
	2011	28,700	10,300	2,400	1,500	4,100
		-3.5%	3.0%	4.2%	-6.3%	7.9%
<i>Data Source: NASS Census of Agriculture</i>						

Georgia farms are also similar to the national average when looking at farm operations by economic size^{xix}. Georgia does stand apart from the US data in two categories of the mid-sized farms. There is growth in farms with sales in the \$100,000-249,999 range while nationally this category has constricted and Georgia farm sales declined in the \$250,000-499,999 range while the US grows. The numbers in both cases are relatively small and the overall change in the two categories combined is zero for Georgia and less than a tenth of a percent growth for the nation.

Farm Gate value is another way to compare production and view a state, county or product's value (*Table 2.6*). Farming is a \$12,002,461,213 business in Georgia with almost 45% of that coming from poultry and eggs followed up by nearly 20% in row & forage crops. The Northeast Georgia region boasts 3 counties in the top 12; Madison at 4th (\$323.8 million), Jackson at 8th (\$281.8 million) & Oglethorpe at 12th (\$244.8 million).

Table 2.6
Farm Gate Value 2010

	Farm Gate	State Rank
Barrow	\$35,574,629	
Clarke	\$18,304,583	
Elbert	\$114,394,917	
Greene	\$59,955,956	
Jackson	\$281,837,562	8th
Jasper	\$68,677,885	
Madison	\$323,780,648	4th
Morgan	\$119,657,747	
Newton	\$17,885,653	
Oconee	\$121,073,290	
Oglethorpe	\$244,812,250	12th
Walton	\$33,083,834	
	\$1,439,038,954	
Georgia	\$12,002,461,213	
<i>Data Source: UGA CAES Farm Gate Report</i>		
2010		

The influences of poultry & livestock production play a big role in the reason for those counties' high ranking. Madison County ranks 3rd and Jackson 5th in terms of poultry and egg value, while Oglethorpe ranks 1st, Morgan 3rd and Greene 6th in livestock and aquaculture value. The only other Northeast Georgia Counties to rank in the top 10 of a major category are Oconee County (6th) and Jasper (8th) in ornamental horticulture value.

Section 3: Production

Northeast Georgia is home to some of the largest poultry producers in the state, especially in terms of broiler production. It has many other products to offer, including top ranking counties in Ornamental production, Livestock and Aquaculture. The region does not focus on major vegetable or fruit and nut production, but does have the

capability to provide those products in amounts that could satisfy the region. The following sub-chapters take a deeper look into some of the agricultural products and in the region.

Table 2.7
Poultry Farm Gate Value 2010

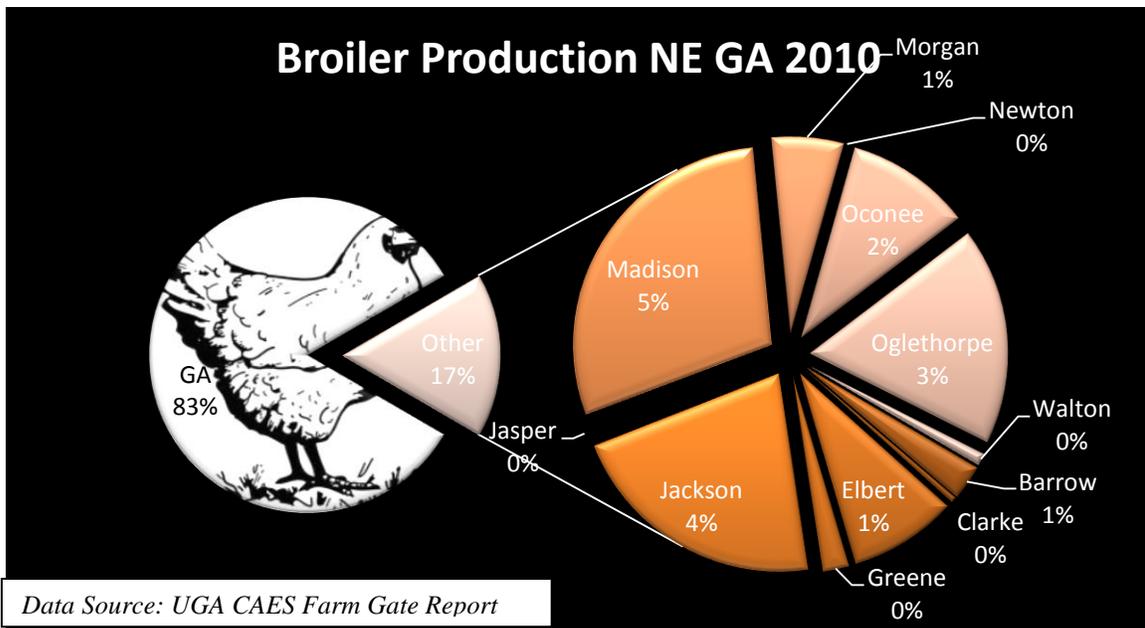
Section 3.1: Poultry

Georgia leads the nation in poultry production and the Northeast Georgia counties contribute heavily to that output (*Table 2.7 and Figure 2.2*). The farm gate value in 2010 of poultry and eggs in Georgia was \$5,387,694,561 with over 77% of that production deriving from

	Production in lbs.	State Rank
Barrow	48,131,820	
Clarke	7,680,000	
Elbert	148,245,504	
Greene	36,038,246	
Jackson	361,574,400	6th
Jasper	3,586,440	
Madison	493,350,000	2nd
Morgan	98,063,616	
Newton	1,617,408	
Oconee	173,260,800	
Oglethorpe	300,300,000	10th
Walton	16,773,120	
NE GA	1,688,621,354	
GA	8,357,324,539	

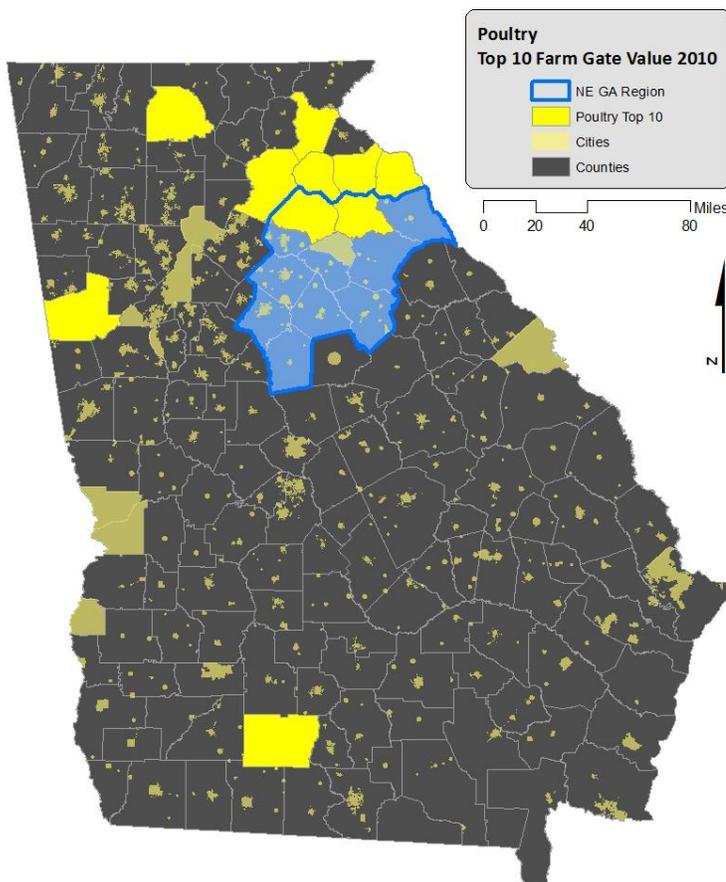
Data Source: UGA CAES Farm Gate Report 2010

Figure 2.2
Broiler Production 2010 Percent of Farm Gate



broilers (chickens raised for meat). The industry uses a multi-stage production system of breeders which feed in to grow-out facilities for broilers or layer facilities for egg production. The close proximity of facilities allows for easier integration and also an increase in economic impact for a region such as Northeast Georgia (*Figure 2.3*). The multiple stages contribute to poultry's inclusion as a value-added product. Georgia has seen continued growth in this sector, providing more jobs and economic impact for the region as the birds and dollars circulate through the area.

Figure 2.3
Top 10 Counties for Poultry Production 2010



Data Source: UGA CAES Farm Gate Report

The early vertical integration^{xx} of poultry farms in America has led to a streamlined operation that spreads risk across the major chicken companies (integrators) and the local farmers who grow out the chickens for production. Integrators will hatch and vaccinate the birds before they are transferred to local farmers who follow strict protocol to raise the birds as fully and efficiently as possible. The farmers are provided

with feed, services and everything that goes into the bird. They raise the birds on average six weeks until being returned to the integrator for processing. These contracts can provide local farmers with guaranteed sales, but also keep them tied to the practices, costs, fees and a timeline of an integrator company. It is an efficient system, but one that requires large infrastructure costs and continual maintenance or upgrades on the part of the farmer. If the farmer does not comply with the integrators requirements and upgrades they will not be given more birds. It takes close monitoring, working on thin margins and diligence by a farmer to provide a valuable product to a discerning customer.

Section 3.2: Livestock and Aquaculture

Livestock is the 3rd largest commodity group in terms of farm gate value in Georgia with just over 10% of the production dollars. Northeast Georgia is well represented in that category by Oglethorpe (1st), Morgan (3rd) and Greene (6th) (*Table 2.8 and Figure 2.4*). Animal production in the state as a whole grew 7.5% or an increase of \$87 million over 2009 values. Over \$51 million of that increase came from pork which grew in value and production. Oglethorpe County is second in the state with 2,500 head processed from farrow to finish in 2010.

Table 2.8
Livestock and Aquaculture Farm Gate Value 2010

	Value	State Rank
Barrow	\$4,096,657	
Clarke	\$2,315,837	
Elbert	\$6,190,061	
Greene	\$25,916,900	6th
Jackson	\$14,946,032	20th
Jasper	\$20,755,404	11th
Madison	\$18,126,025	14th
Morgan	\$40,436,657	3rd
Newton	\$8,428,606	
Oconee	\$11,574,483	
Oglethorpe	\$60,478,017	1st
Walton	\$5,037,054	
NE GA	\$218,301,733	
GA	\$1,248,599,742	

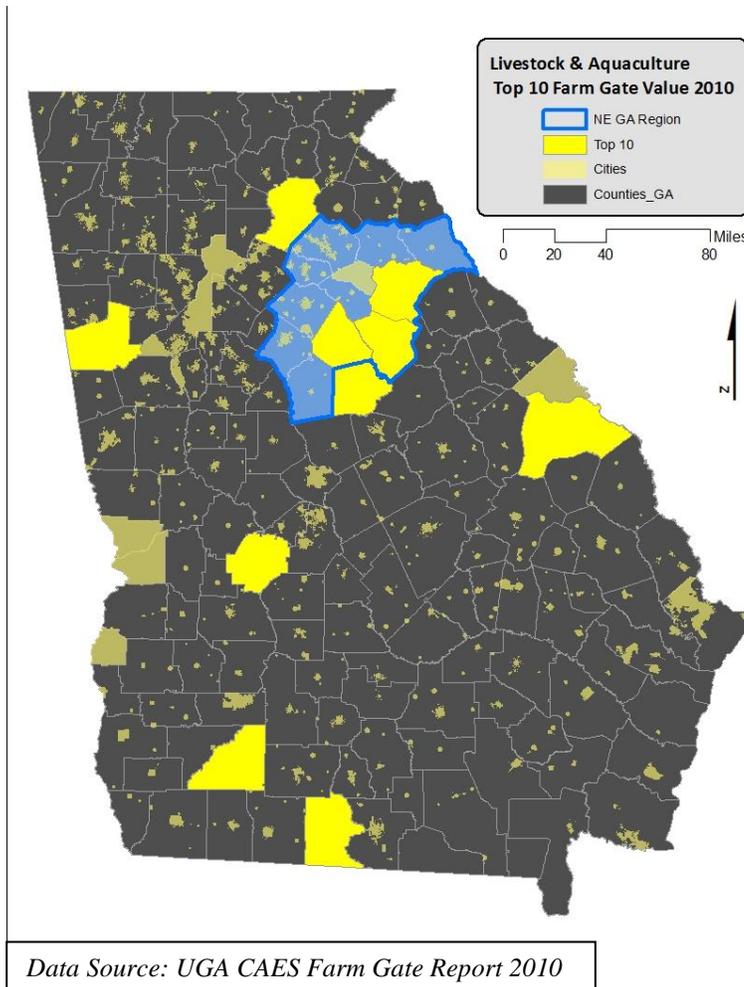
Data Source: Georgia Farm Gate Report 2010

Cattle are especially well represented in this portion of the state in terms of production and sales. Oglethorpe County is second in the state with 2,500 head processed from farrow to finish in 2010.

Cattle are broken down in a variety of ways for statistical purposes with the largest category being termed simply beef cows. The overall value of beef cows in Georgia is \$311,032,478 which represents more than 25% of the livestock value in Georgia. Cows in that range average 373.5 pounds and generally receive \$1.04 per pound. Madison County ranks first in Georgia in this category with \$7.4 million in 2010,

Figure 2.4
Top 10 Counties for Livestock Production 2010

other regional counties in the top 10



include Morgan and Jackson with each bringing in over \$6 million. The Northeast Georgia region has two auction houses, one in Athens and one in Greensboro which are fourth and eleventh largest in the state selling over 33,500 heads of cattle in 2010.

The region's Top 10 ranked cattle and dairy farms are located in southern-central portion of the area in mainly rural counties, abutting populous counties. This position shows the proximity of producers in the region to offer facilities and products to a wider audience. Northeast Georgia is also home to pork, catfish, goat, honeybee and quail operations. The progress in livestock and aquaculture is apparent in the region, but the potential with available land, proximity to population centers and growth in specialty products puts Northeast Georgia in a great spot for continued success.

Section 3.3: Vegetables, Fruits & Tree Nuts

Vegetables, fruits and nuts accounted for just over 15% of Georgia's Farm Gate in 2010; Northeast Georgia only produces a fraction of the value (**Table 2.9 and Table 2.10**). In both categories of vegetables and fruit & nuts, Madison County is the highest ranked in the region at 51st and 67th

respectively. The study region only produces two tenths of a percent of the state's vegetables and just a bit more at six tenths of a percent of the state's Fruits & Nuts in terms of farm gate sales. This reflects the size of large scale vegetable farming and orchards in southern portions of the state (**Figure 2.5 and Figure 2.6**). It also leaves open opportunity for growth in production in

Table 2.9
Fruit & Nut Farm Gate Value 2010

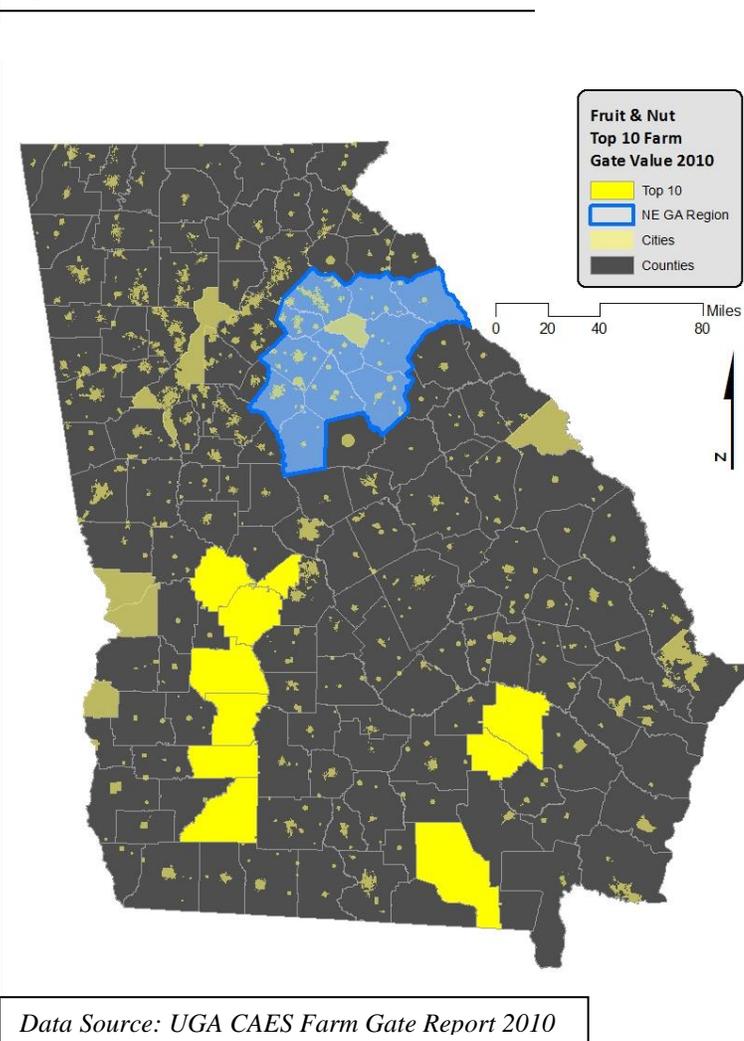
County	\$	Region Share
Barrow	96,250	
Clarke	3,865	
Elbert	42,800	
Greene	18,950	
Jackson	0	
Jasper	163,070	
Madison	863,525	
Morgan	291,880	
Newton	269,404	
Oconee	694,360	
Oglethorpe	24,910	
Walton	119,850	
NE GA	2,588,864	0.6% of GA
Georgia	450,718,027	

Data Source: UGA CAES Farm Gate Report 2010

these products. Of the top 10 commodities produced by the state pecans are the only product from the fruit and nut category in that group produced by the state. Onions, which grow in central-eastern counties of Georgia are 15th (\$139 million) and blueberries which are grown in most of the region's counties are 16th (\$133 million). Another reason for encouraging regional farmers to get involved with vegetables, fruits and nuts (the overall employment category) is their employment multiplier of 2.045 meaning for every new producer a second job is created

throughout the state in processing, shipping or sales.

Figure 2.5
Top 10 Counties Fruit & Nut Production 2010



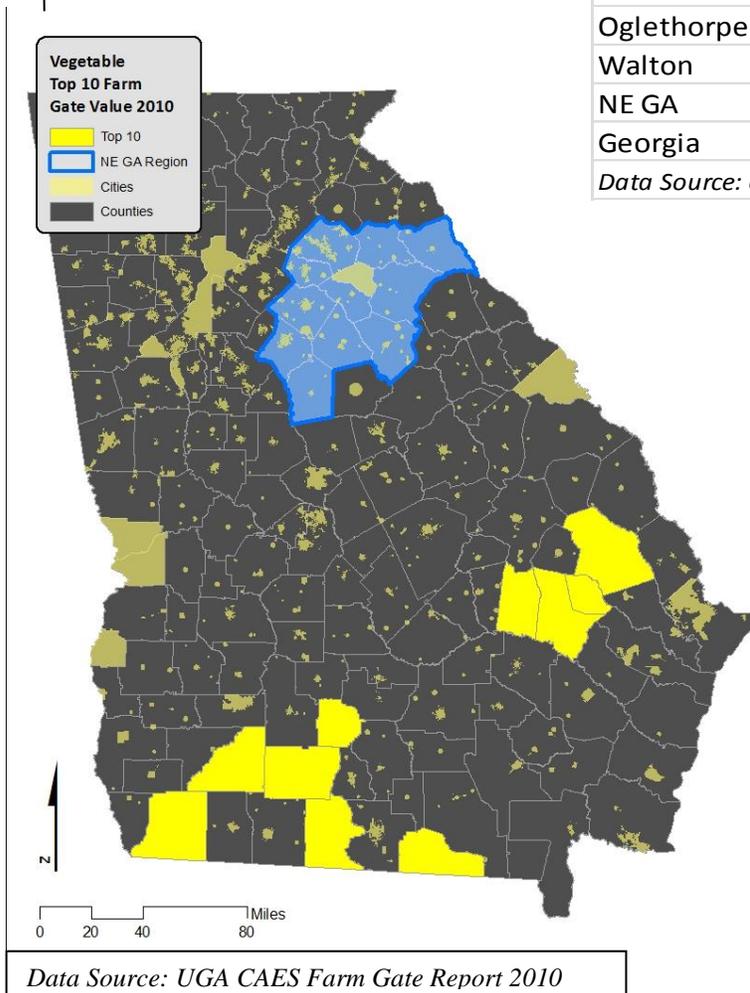
Data Source: UGA CAES Farm Gate Report 2010

Table 2.10
Vegetable Farm Gate Value 2010

County	\$	Region Share
Barrow	16,900	
Clarke	0	
Elbert	289,213	
Greene	10,877	
Jackson	0	
Jasper	99,330	
Madison	754,381	
Morgan	0	
Newton	418,533	
Oconee	53,400	
Oglethorpe	10,263	
Walton	176,678	
NE GA	1,829,575	0.2% of GA
Georgia	752,831,559	

Data Source: UGA CAES Farm Gate Report 2010

Figure 2.6
Top 10 Counties for Vegetable Production 2010

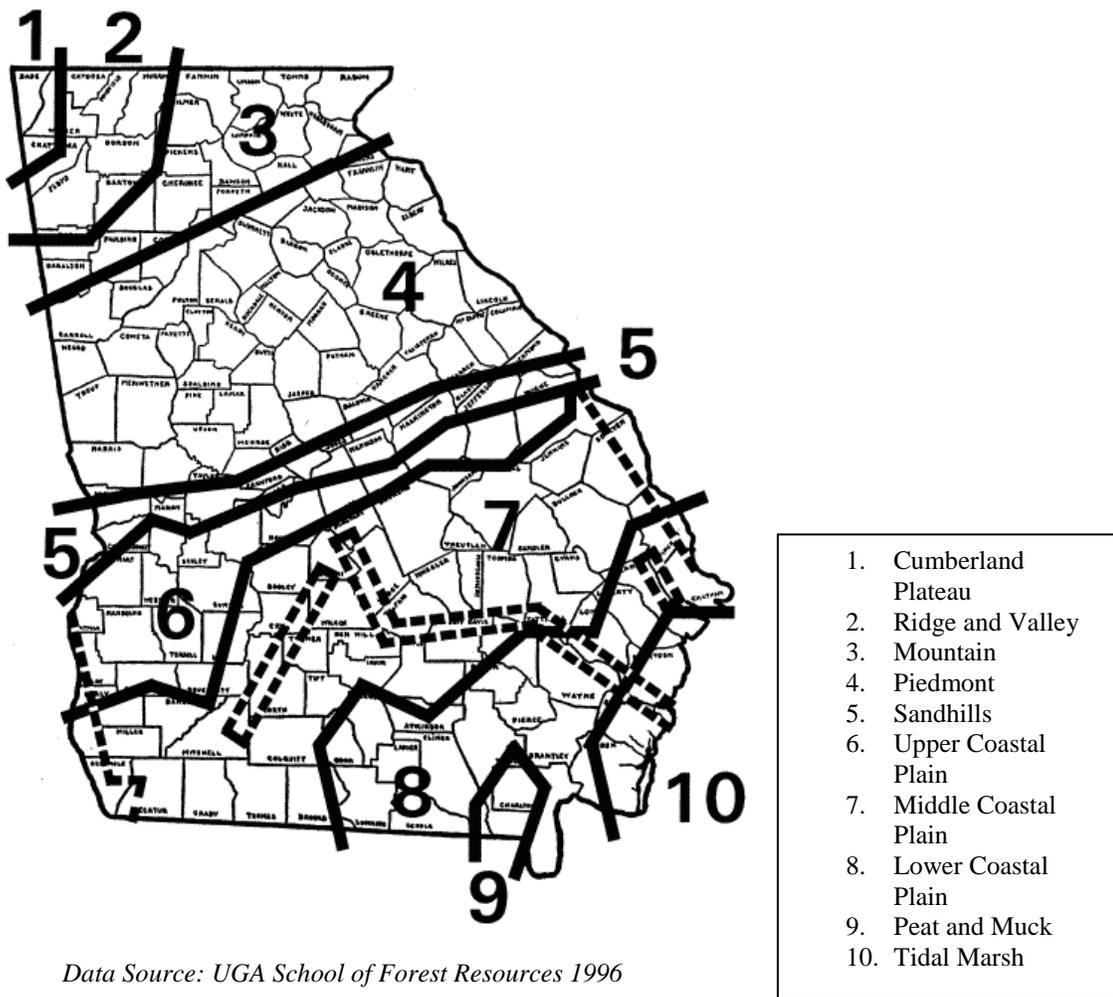


Section 4: Soils

The Northeast Georgia region is located in the Piedmont physiographic region which runs from Virginia to Alabama (*Figure 2.7*). The land was covered with oak and hickory forests until massive clearing took place to grow cotton between the late 1700's and well into 1900's. The Cecil soil series is commonly found throughout the region. Cecil soils originally had sandy loam topsoil over clay-based subsoil. The southern

portion of the piedmont is home to richer soils and flatter topography which led to

Figure 2.7
Soil Zones in Georgia



much of the cotton production while the northern piedmont became home to subsistence farmers and eventually poultry and hog production. The erosion due to row crop production removed the topsoil that contained valuable nutrients and water holding capacity. Most of the topsoil was deposited into streams and ponds.

The Natural Resource Conservation Service (NRCS) has been working for years to restore the soils and currently runs a program called the Conservation Reserve Program that pays farmers to convert highly eroded soils to vegetative cover, unfortunately for this study's region the program's northern edge is just south of Morgan County. The NRCS does offer other programs and assistance for farmers, ranchers and individuals looking to preserve or remediate portions of their land. The rise of confined poultry production has greatly benefitted the regions soils. The conversion of sloping land to pasture and the use of poultry litter have helped restore soil productivity^{xxi}.

Section 5: Conclusion

The Northeast Georgia region has a diverse agriculture. Also, large scale production is the largest sector; there are examples of producers extending into production that capture market share such as growth in ornamental production in Oconee County. The data shows that region ranks favorably in terms of poultry and livestock production with Madison (3rd) and Jackson (8th) counties are in the top 10 for overall farm gate, and Oglethorpe (12th) rounding out counties that produce over \$200 million dollars annually. It will be important going forward to continue supporting animal production, but the region should also continue to cultivate other sectors, especially for local distribution. Offering specialized fruits, vegetables and animal products is a way

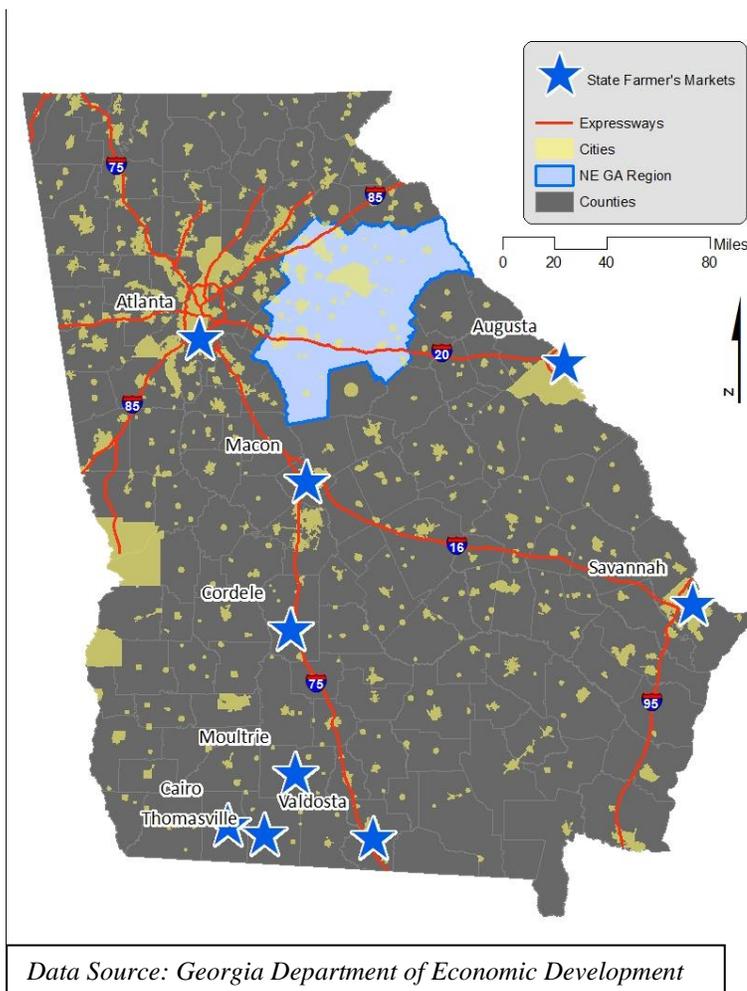
for farms in the region to supply the needs of a more food conscience public. Both fruits and vegetables and animal production offer secondary markets for processing and distributing the products throughout Northeast Georgia which could improve economic activity.

CHAPTER 3

Infrastructure

The Northeast Georgia region is well situated in terms of infrastructure to transport products. The proximity to Atlanta plays a large role in that accessibility and also opens up other avenues just beyond the region's boundary. Whether products need

Figure 3.1
State Farmers Markets



to travel by road, air or sea Northeast Georgia is not far away. The region is also fortunate for its contact with valuable resources such as the University of Georgia, the State Economic Development Department and consumers interested in regional products.

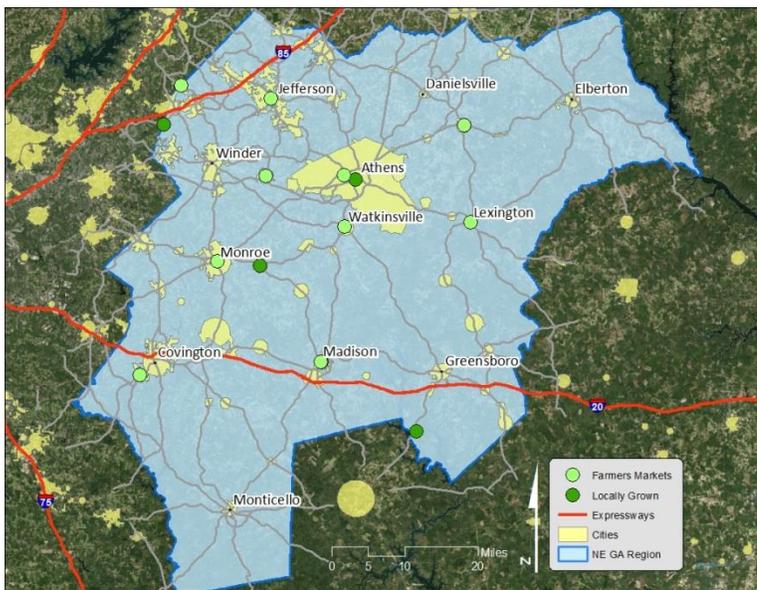
Section 1: Distribution Markets

The agriculture sector of Georgia has brought about the need for a large distribution network. One distribution avenue in that network is the state farmer’s market system. This network has locations across the state but the primary center is in Atlanta. The system also favors the major agricultural region of South Georgia (*Figure 3.1*). These markets often supply to wholesale distributors, but are also open to direct sales. In total they are responsible for over a billion dollars in sales each year.

An alternative, direct sales distribution was recently created in Athens and has now spread across the country; it is the Locally Grown Network (*Figure 3.2*). It works as an online farmer’s market with customer’s ordering from a weekly list each Monday and picking up their goods at a central location later in the week. Each market is driven by

the accessible goods and providers that will agree to supply customers for each

Figure 3.2
Regional Farmers Markets



Data Source: www.locallygrown.net and GA Dept. of Agriculture

location. Customers get more than just a predetermined box like they would at most Community Supported Agriculture Box Programs (CSA; see *Glossary*), but also the direct connection to farmers and suppliers. The suppliers are not

required to be organic, but all are synthetic-chemical free with some being certified organic, some ecologically based, certified naturally grown and some listed as sustainable (*see Glossary*). The idea is more about supplying products that are raised with processes that work to build soils, limit unnatural inputs and seek harmonious ecological habitats; eliminating middlemen and providing what the customer wants. This arrangement benefits the farmers because they are able to harvest the exact amount demanded and have the guaranteed sales before they go to market.

The region also has a variety of traditional farmers markets with local vendors and products. Farmers are able to take advantage of both the Locally Grown network and the more typical farmers markets to distribute their products to a wider audience. Throughout the region the markets have anywhere from 10-40 vendors are open on different days. Many farmers sell on different days to get more products to more customers. Saturdays are still the most popular for markets, but some open throughout the week to provide more options for consumers and farmers.

Commercial distribution is also a big economic factor throughout the region particularly in counties along the interstate and closer to Atlanta. As far as the region goes Clarke County is a leader with the amount of traders (*Table 3.1*), but is by no means alone. Jackson County leads in terms of transportation and warehousing which is likely due to its adjacency to I-85 and proximity to Atlanta. Walton and Newton Counties follow right behind with both sitting along the I-20 corridor. The two interstate highways that run through the region are major drivers in terms of warehousing, industrial parks and population growth. Looking at most economic measures for the region, much of the business and movement are either along these corridors or surround Athens Clarke

County. Going forward, local opportunities exist for aggregation to occur throughout the counties, but most products could leave the

Table 3.1
Wholesale, Transportation & Warehousing

region via the expressways to be sold

County	Category	Establishments	Employees	Annual payroll \$
Barrow	Wholesale trade	68	1,120	46,527,000
	Transportation, Warehousing	23	971	35,829,000
Clarke	Wholesale trade	112	1,748	83,311,000
	Transportation, Warehousing	51	818	28,893,000
Elbert	Wholesale trade	40	316	10,791,000
	Transportation, Warehousing	16	75	2,302,000
Greene	Wholesale trade	22	112	4,669,000
	Transportation, Warehousing	12	20-99*	1,086,000
Jackson	Wholesale trade	73	1,000	37,261,000
	Transportation, Warehousing	53	1,594	56,447,000
Jasper	Wholesale trade	4	1-19*	85,000
	Transportation, Warehousing	4	4	90,000
Madison	Wholesale trade	19	158	5,834,000
	Transportation, Warehousing	13	20-99*	*
Morgan	Wholesale trade	18	100-249*	*
	Transportation, Warehousing	8	1-19*	620,000
Newton	Wholesale trade	68	1,181	71,041,000
	Transportation, Warehousing	51	260	9,038,000
Oconee	Wholesale trade	40	289	11,257,000
	Transportation, Warehousing	21	51	1,015,000
Oglethorpe	Wholesale trade	9	30	950,000
	Transportation, Warehousing	7	1-19*	452,000
Walton	Wholesale trade	85	763	27,747,000
	Transportation, Warehousing	39	1,133	45,291,000
*figures withheld to protect firms				
Data Source: NASS Census of Agriculture 2007				

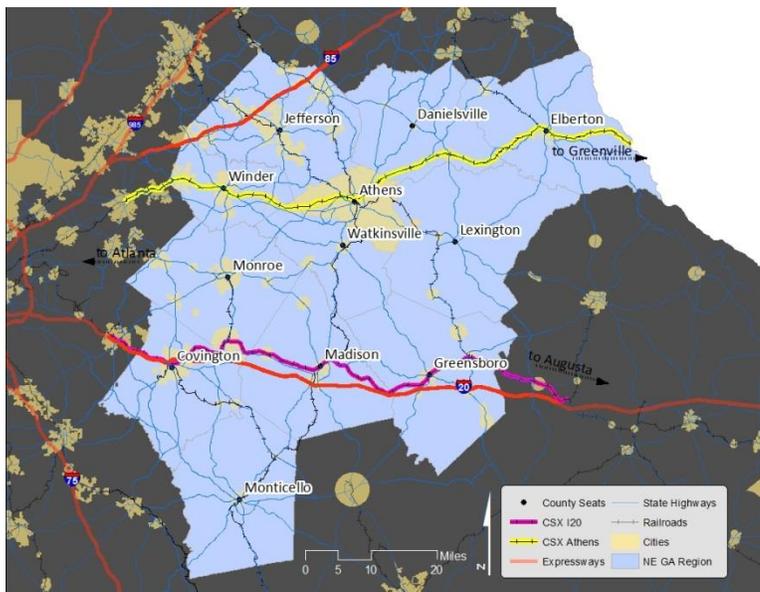
throughout the state or rest of the country. It would be desirable for the region to consider locations along each of these transit routes as potential hubs for the region.

Regional production numbers are positive, with dedication and diversity the future holds potential for one on each Interstate serving the region.

Shipping of agriculture products is a challenging business with small and large operators having different advantages and drawbacks. Timing, storage and handling all can have negative impacts on product quality along the path from field to customer making distribution a complex operation^{xxii}. The transition from field to processor or consumer for perishable products needs to be made as quick as possible for optimum quality. Nutrient loss and spoilage begin from the time products are harvested and in larger operations can be addressed through gases that preserve foods, freezing or processing. Storage and handling have similar issues in that moving an item from the field to consumers involves varying temperatures, rough journeys and multiple transitions, all of which can damage the product. These problems are part of both the commercial and local systems, yet addressed with varying tools. Localized systems have

the power to provide fresher produce in fewer steps, but often in lower volumes

Figure 3.3
Transportation in the Region



Data Source: NEGRG GIS Department

and less efficient frameworks. Operations such as the Locally Grown Network and Local Vendors Coalition (see *Glossary*) are working to facilitate easier transfer from the farmer to the consumer and potentially providing the necessary

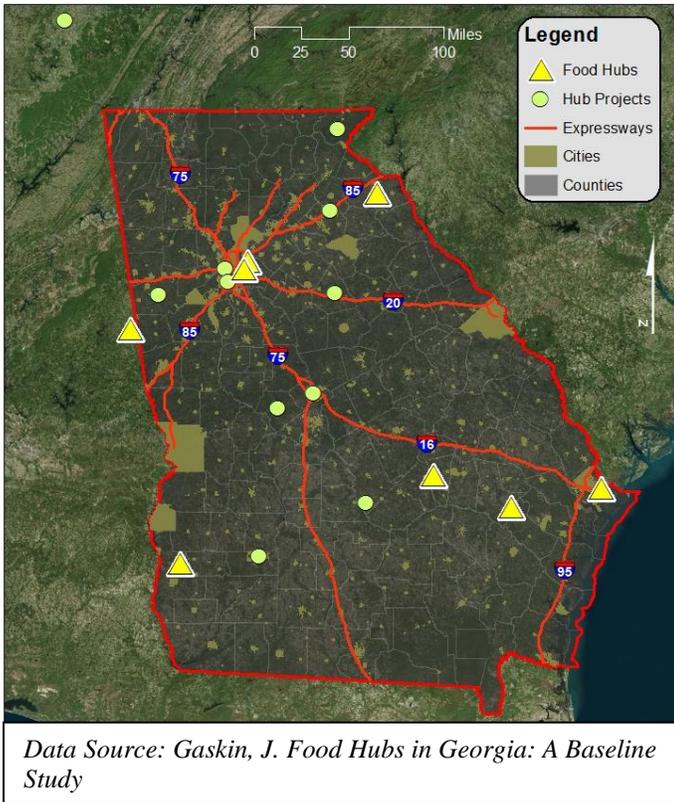
connection to make the local system more successful^{xxiii}. The large suppliers and distributors already have those connections in place to operate efficiently, but they are spread across regions or the entire nation making their operations less focused on local supply. The bigger suppliers are also able to provide consistency as well as nearly any product in any season.

The region is fortunate to be located adjacent to Atlanta which serves as a clearinghouse for every type of product produced in the state (*Figure 3.3*). See *Appendix #4* for a list of national, regional and local distributors as well as a short discussion on the system from a chef’s perspective and input from UGA’s Food services.

In terms of consistency, the food hub concept is an attempt to provide a

mechanism for local aggregation to supply

Figure 3.4
Food Hubs & Food Hub Projects 2012



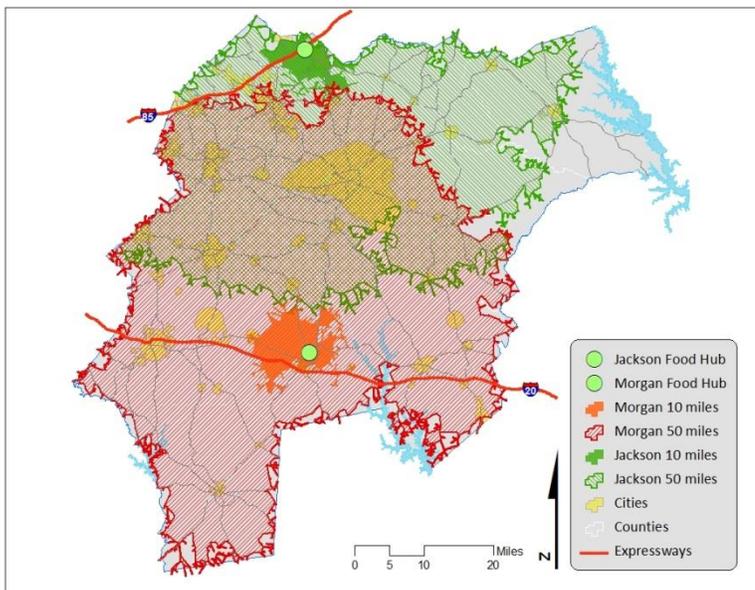
wholesale. Georgia currently has eight food hubs and 11 projects in the works based on a recent study^{xxiv} (see *Appendix #5*) (see *Figure 3.4*). The criteria for that study considered operations that aggregate from at least five farms, engage the wholesale market and source a majority of their products from Georgia operations as a food

hub. Food hubs can benefit from connecting with the institutional markets of schools, hospitals and jails because these have consistent menus that require appropriate nutrition and large volumes of products purchased. The food hub operations in Georgia currently sell to the restaurant and grocery store markets, but would need to expand to supply the demands of an institution.

The Region could possibly support two food hubs (*Figure 3.5*). My analysis indicated that two sectors of interest were fruits and vegetables, and animal products. There are two projects in Northeast Georgia looking to provide regional aggregation/distribution services. The north hub is in Jackson County and initial work on that project is for a potential vegetable and fruit food hub. The southern hub is in Morgan County. Recent survey and meetings in this area indicates farmer’s interest is to process meat. These two hubs combine to almost cover the entire Northeast Georgia region. A

50 mile analysis over the roads indicates they cover every city. The projects

Figure 3.5
10 and 50 mile range of Food Hub Projects

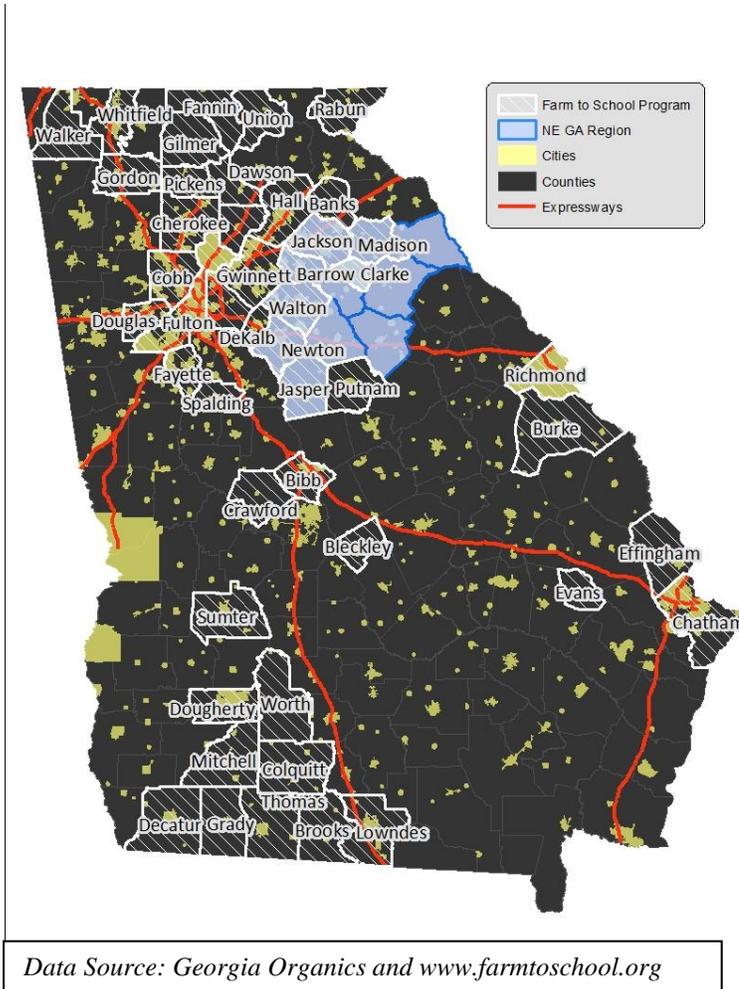


Data Source: NEGRG GIS Department

completely overlap in Athens, which displays again the chance for distribution or sales in the most populous city of Northeast Georgia. The analysis was done strictly for the region; however the range would extend into

other counties and provide more potential for aggregation and distribution. Food hubs are one tool for addressing the distribution of products, but other resources need to be used to tackle the overall problem of supplying a population local food.

Figure 3.6
Counties with Farm to School Programs



Data Source: Georgia Organics and www.farmtoschool.org

The farm to school program is working towards local buying options that would bring Georgia food into Georgia schools. Many government agencies across the country have recently pledged to purchase more local food which could be a great impetus for further connection and growth in this area. Currently, the Cobb county schools and

City of Decatur schools are the only two with dedicated local food purchases, but a variety of individual schools and other school districts have shown interest and pledged to place Georgia or regionally grown products into their meal programs (**Figure 3.6**).

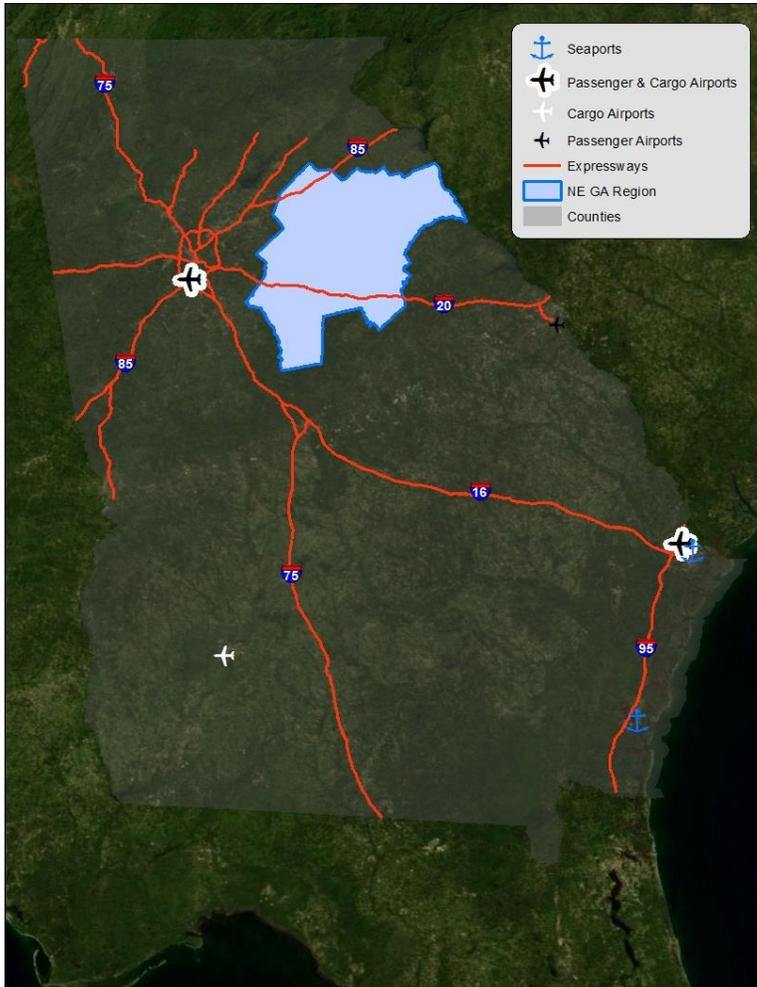
Section 2: Shipping

Shipping by air can cost up to 10 times as much than by truck and 15 times as

much by sea^{xxv}. The trade-off is time, by

air overseas can take one day while by

Figure 3.7
Georgia Ports & Passengers



Data Source: NEGRG GIS Department

ship can be up to two weeks. The difference is less when products are shipped inside the United States because trucks can cross the country in three days. Trucks are always an important piece of this equation because produce generally will begin or end on one no matter which mode of transportation is used and Northeast Georgia is well

located to facilitate that

journey.

Savannah's seaport is one the most active in the country ranking fourth in total volume. It is well connected to the eastern half of the United States by a Class I railroad and two interstate expressways. A recent report by the University of Georgia's College

of Agriculture and Environmental Sciences stated that over \$2.6 billion in agricultural products are shipped out each year^{xxvi}. This is more than double the agricultural products that were shipped out of Savannah just six years ago. The products also contribute heavily to secondary jobs in the fields of processing, storage and transportation^{xxvii}. Brunswick, Georgia also services the agricultural shipping needs of the mid-west and southeastern markets through its Colonel’s Island agri-bulk facility. It is among the largest deep-water operations on the east coast and highly connected through the same rail network and interstate expressways as Savannah. The state transportation infrastructure is ready for products to be moved around the globe, next it is important to understand how Northeast Georgia connects into that network.

In terms of roads, Northeast Georgia has direct access to two interstate highways that directly connect it to Atlanta, Greenville and Augusta. It is also covered by a web of highways; especially in the northern half that link up the county seats and expressways with the more rural portions of the district (*Table 3.2*). Access to the Atlanta market is

integral to the success of the region because

Table 3.2
Distance from County Seats to Major Ports

	Albany	Atlanta	Augusta	Brunswick	Savannah
Athens	202	79	103	283	224
Covington	176	44	119	287	228
Danielsville	218	96	107	287	229
Elberton	229	121	88	271	212
Greensboro	174	85	82	248	189
Jefferson	244	70	123	315	256
Lexington	203	97	85	265	206
Madison	179	68	98	266	207
Monroe	192	54	125	290	231
Monticello	153	63	119	254	195
Watkinsville	195	80	107	273	214
Winder	207	64	130	305	246
Data Source: Google Maps					

of the opportunities for local delivery, regional distribution and beyond.

In terms of hubs or distribution points Atlanta serves a major role for the

Southeastern United States as well as the

world. There are three airports in Georgia

that can handle cargo aircraft (Atlanta,

Table 3.3
Air Cargo Tonnage 2009

City	2009 Tonnage
Atlanta	663,724
Albany	26,076
Savannah	5,666

Data Source: Georgia Department of Transportation, Georgia Statewide Freight and Logistics Plan 2010-2050

Albany & Savannah) and Atlanta out-paces them many

fold (**Table 3.3**). Hartsfield-Jackson Airport is home to

advanced storage capability and a USDA inspection site as

well being within a 2 hour flight of 80% of the nation. To

combine with the air transit capability, Atlanta is served by

over 100 major trucking companies and two of the four major railroads (CSX & Norfolk

Southern).

Savannah is the second hub in Georgia due to its International Airport, massive seaport and connection by rail. The port has experienced massive growth, especially in the produce trade and is in the process of deepening its channel to support even larger vessels. The expansion will increase access on larger ships, lowering the bottom line cost and correspond with the work to update the Panama Canal.

Albany comes in third in terms of ports, but is actually the second most used air cargo facility in the state. It is also a great facility for Southwest Georgia which otherwise lacks much infrastructure to transport cargo. Albany is unique because its runway is not long enough to accept major cargo planes, but is open for UPS planes that are smaller and transport regionally. Augusta has the third most passenger traffic by air

in Georgia and is a gateway for travelers to make easy connections with regional businesses.

Section 3: Resources

The Northeast Georgia Region offers a great academic resource for the field of agriculture; The University of Georgia (UGA). Gainesville State University is another opportunity for the field with programs in agriculture at their Oconee County campus. There are other institutes of higher learning throughout Northeast Georgia which deal with problems associated with poor health, the law and economics, but none that specifically work in the agricultural sector. The University of Georgia, as a land grant institution is set up to help specifically in the areas of agriculture, science and engineering. It is also home to the state cooperative extension program that reaches out directly to farmers and communities that need technical assistance.

Help from the cooperative extension can directly assist farmers with their operations or farms. The university is also publishing research to help growers, suppliers and even regional planners. That work can be put into action and used to build the industry, promote local food systems or bolster a new business plan. The University of Georgia has numerous colleges geared specifically to address agricultural production and distribution including the College of Agriculture and Environmental Sciences, School of Forestry and Natural Resources, College of Environment and Design, School of Engineering, College of Family and Consumer Sciences and College of Public Health. There are also many individual departments throughout UGA's other colleges that address issues with food and food production. This resource is not only a direct

contributor to production but also an amazing supply of talent for the industry and leader in sustainable practices. The University is working to promote the local food system as well as practices that can reduce the use of valuable resources through on-campus composting efforts, campaigns to buy local produce and educational programs that inform residents of easier ways to take part in the local food system.

The University purchases over \$10 million in food products each year from the commercial suppliers. Their local and traditional methods of food preparation have received many awards and offer students the variety that is common in the American diet. Using products from the traditional suppliers, the food services at UGA are still able to showcase regional cuisine and highlight the impact that Georgia has on the national agricultural system.

One item often overlooked in the pursuit of alternative foods is the impact that commercial processors from the region can have on a community's economic well-being. Many of these companies use commercially sourced products from all over the country, but often contribute in a lot of positive ways to a local economy. They pay taxes, create jobs, spend money on other local businesses and do support local suppliers when the price is right. The Northeast Georgia region is home to 83 businesses that are registered as Food Manufacturing or Beverage and Tobacco Product Manufacturing according to the economic development department. They range from 800 employee chicken processors to bakeries and canneries run by a single individual. Those operations can provide an outlet for products grown in the region.

In terms of future processors, warehouse operators or distributors, Georgia's corporate tax structure rewards newer companies (years 1-5 of operation) for job

creation. Clarke and Elbert are tier 1 counties and can reduce their tax burden by up to \$4,000 per employee beginning with their second worker. Greene County is in the second tier meaning \$3,000 for 10 or more employees and all other counties in the region except Oconee are tier3 which can mean up to \$2,000 for employee with number 15 and each one above. This information is all part of a helpful guide published by the state economic development department titled “Business Incentives.”

They also list quite a few other important pieces of information on the state economic development website including available buildings with characteristics search queries. The site lists 107 buildings in the region between 5,000 and 200,000 ft² that could be used for processing, warehousing or distribution of agricultural products. The search provides important data such as flooring, dock space, utilities, prices and contact information for purchase or lease. It is no surprise that 80% percent of those buildings are within five miles of the two interstate highways or Athens.

Section 4: Disposal

Farms and the food system generate millions of tons of waste per year, whether by animal manure, unusable plant matter or product containers. As landfills reach capacity and new ones are planned many people have begun to find ways of diverting materials from landfills and municipalities are raising fees. Farms are in a unique position to dispose of organic materials before processing and consumption which often times adds materials to raw products that can contaminate land. Having source separated scraps can also bring economic benefits due to the higher nutrient value^{xxviii}. Farms also are able to take advantage of animal manure (chicken litter specifically in Georgia) as a

resource for fertilization and regions (especially North Georgia where most of the litter is produced) have begun to see the advantage of spreading manure using nutrient management to avoid environmental problems that can arise due to overloading specific locations or watersheds. Many operations are also looking to store litter properly due to the need to spread it at specific times in the growing cycle and reduce contamination.

A recent study titled *Assessing the Market for Poultry Litter in Georgia: Are Subsidies Needed to Protect Water Quality*^{xxix} addresses the fact that some counties are rich in poultry litter which can lead to overspreading and contamination of waterways. The study looked into funding systems to move that “waste” from high litter producing counties to ones lacking chicken litter, but needing additional fertilizer for their agricultural production. The report evaluated typical nutrient demand by dominant production crop, considering that different crops need different amounts of nitrogen and phosphorus. It combined fertilizer needs in certain areas with diesel and fertilizer prices. The results indicated that all counties with excess chicken litter, if connected properly with counties needing chicken litter, could turn a profit by transporting and selling the “waste” in those under-fertilized places, requiring no subsidy. The Northeast Georgia region could take advantage of this situation due to its position in the broiler production chain.

Composting is another potential economic income for farmers if they are able to find time to dispose of, pick-up or manage the materials. Farmers have an advantage over residential or commercial property owners and that often comes in the form of extra space. They also have many of the materials as well as the need for nutrient additions on their production. Compost is becoming a big, complex business, but having a good

operation requires a full time commitment, something a farmer cannot dedicate without having his other projects suffer^{xxx}. In the region, Athens is the only place with a public composting facility. The region also has a private facility in Greene County that is associated with a poultry processing plant. One other unique feature in Georgia is the prison composting program that is funded through money made by the recycling program and saved the state almost \$1 million in 2007.

The options for producers and processors to move their goods and supply customers are fairly substantial along the interstate corridors and west of Athens-Clarke County. Local transportation to these areas is an option for the counties in the eastern portion of the region, but would likely require an aggregation facility for the product. Such a facility could certainly take the form of a food hub or mirror the state farmer's market in Atlanta that provides space and options for wholesale or direct-to-customer sales. The most logical options for facilities are Athens, along I-85 or along I-20. There are benefits and drawbacks to each. Athens provides a central point, adequate resources and consumer base, but lacks the best transportation options outside of rail. Having a facility on each Interstate would provide options for producers in the Northeast Georgia region and have direct access for truck transit throughout the state and southeast. The Interstate options also have the potential of being closer to producers as Athens is more urban than the other counties in the region. The counties along the interstates also have many facilities that could function as a processing, warehouse or distribution center including undeveloped Stanton Springs at the convergence of Jasper, Morgan, Newton and Walton Counties. Going forward, it would be great to see cooperation between multiple jurisdictions in locations where they converge to truly have a regional impact.

CHAPTER 4

Consumption

Consumption is not always acknowledged when people think of food systems because it is a necessary part of our daily life. The act of choosing food can be very powerful and while it has been influenced heavily by food processors it is still guided by the tastes of the public. Choosing regional products can have impacts on health, the local economy and the path that food takes into the future^{xxxix}. While the amount of processed food grows it has been positive for the agricultural sector to see increased consumption in whole foods. At the same time there has been preservation of long standing varieties in ethnic or heirloom produce and heritage breed animals.

Section 1: Consumer Food Habits

Consumers fall into many categories that are tracked by the United States Bureau of Labor Statistics. Their habits are broken down by a variety of commonalities and for the purposes of food consumption it is helpful to look at spending by homeowners vs. renters and urban vs. rural. The northeast Georgia region has a range of housing types and densities which can be served in varying ways by the agricultural system. The consumption habits also can give local producers an idea of where their markets lie especially as the state and region grow or the population becomes more urban. These figures are for the nation as a whole and represent averages by type which could vary

throughout the country, but does give producers an idea of how a local population may spend.

The average consumer spends \$6,458 of their \$49,705 consumption dollars on food in the US^{xxxii}. This is around 13% of an individual's total expenditures, but less than 10% of their total earnings, making the US the lowest spenders by percentage in the world. Other highly developed nations follow closely behind while the poorest nations as well as developing ones spend up to half of their earnings on food. In the US, the poorest citizens rank food second on the list of expenditures at 17% (behind housing, highest for every bracket) while the richest fifth of our population spend more on transportation than food which is third for them^{xxxiii}. The richest fifth of our country also spend more money on food away from home which is a trend that not only reflects wealth but also urbanization, because (urban dwellers spend more money eating out than their rural counterparts).

The Consumer Expenditure Survey also looks at these spending categories by region (Midwest, Northeast, South & West) (**Table 4.1**). All regions spend right around 13% of their expenditure dollars on food, but they begin to vary when broken down by product and location. Somewhat ironically, Southerners, who have the lowest income, are second when it comes to spending that money away from home. They also spend more on meat (pork specifically) and less on fruits & vegetables than the rest of the nation.

Section 2: Where Food Dollars Go

Much of the money in each dollar spent on food that used to go to the farmer (*Figure 4.1*), but now goes to a variety of other outlets that process, market and transport the raw product to each consumer^{xxxiv}. This has negatively impacted small and mid-sized farms over the years that often cannot capitalize on volume the way large farms and large distributors can. Stagnated prices have hit the farmers hardest leaving them to absorb the price differences more than most other parts of the food production chain.

This disparity could be seen as an opportunity for the small or mid-sized farmer to compete on a more regional level, from opportunities to pool resources to providing the quality service or products that many people are demanding. The farms that are not plugged in to the large industrial model can see where money currently goes and partner with other operations to provide some of the services or convince an operator in their region to take them on.

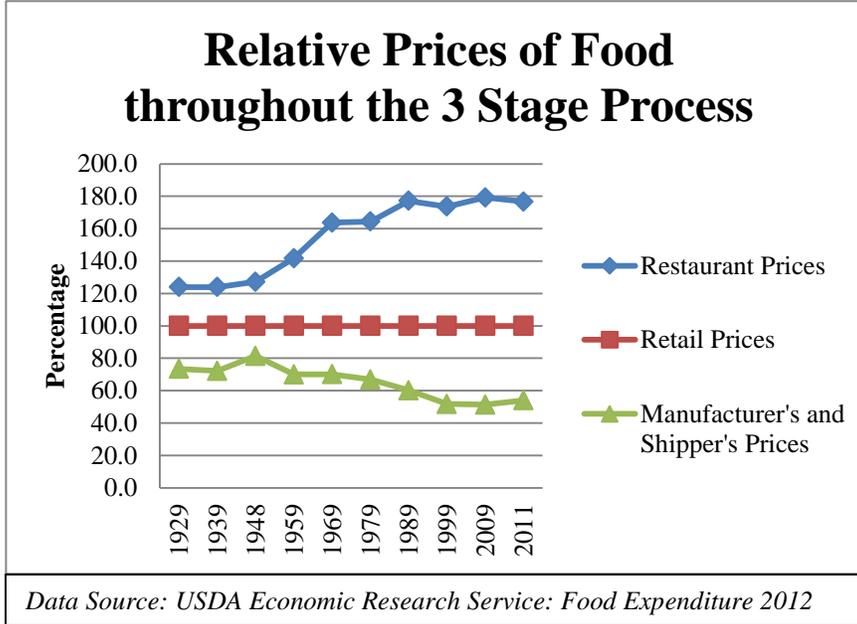
Table 4.1
Consumer Expenditure Data 2011

	avg	Homeowner	Renter	Urban	Rural	South
Avg. Annual Expend. \$	49,705	57,502	35,274	50,348	42,540	45,699
Food Total \$	6,458	7,244	4,996	6,489	6,090	5,980
% on food	13.0%	12.6%	14.2%	12.9%	14.3%	13.1%
Food at Home	3838	4286	3005	3824	4013	3505
% at home	59.4%	59.2%	60.1%	59.0%	65.9%	58.6%
Food Away From Home	2,620	2,958	1,991	2,665	2,077	2,474
Meat \$	832	921	668	830	866	881
Beef	223	251	169	221	243	218
Pork	162	180	129	160	187	174
Poultry	154	163	139	155	147	154
Eggs	50	53	44	50	47	48
Dairy	407	461	306	402	465	356
Fruits & Veg \$	715	800	556	721	639	612
Fresh	471	534	354	478	388	390

Source: US Bureau of Labor Statistics 2011 Consumer Expenditure Survey

If farmers only get 14 cents from every dollar spent on food, where is the rest of

Figure 4.1
Who gets your food dollars?

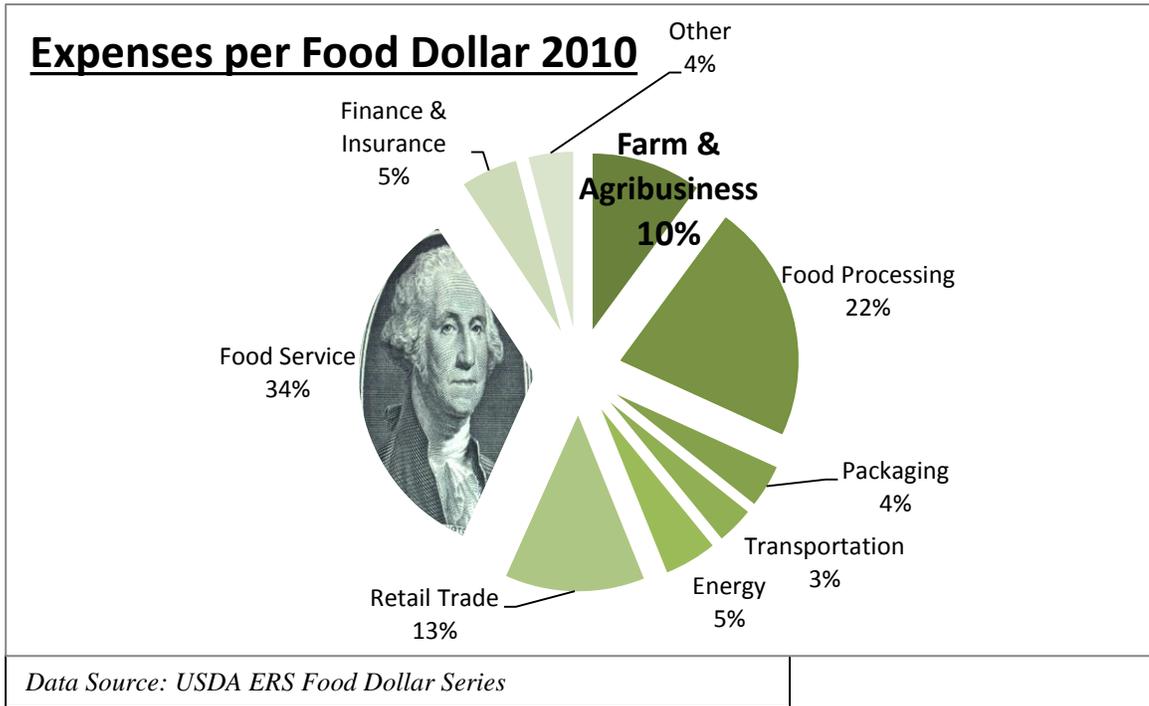
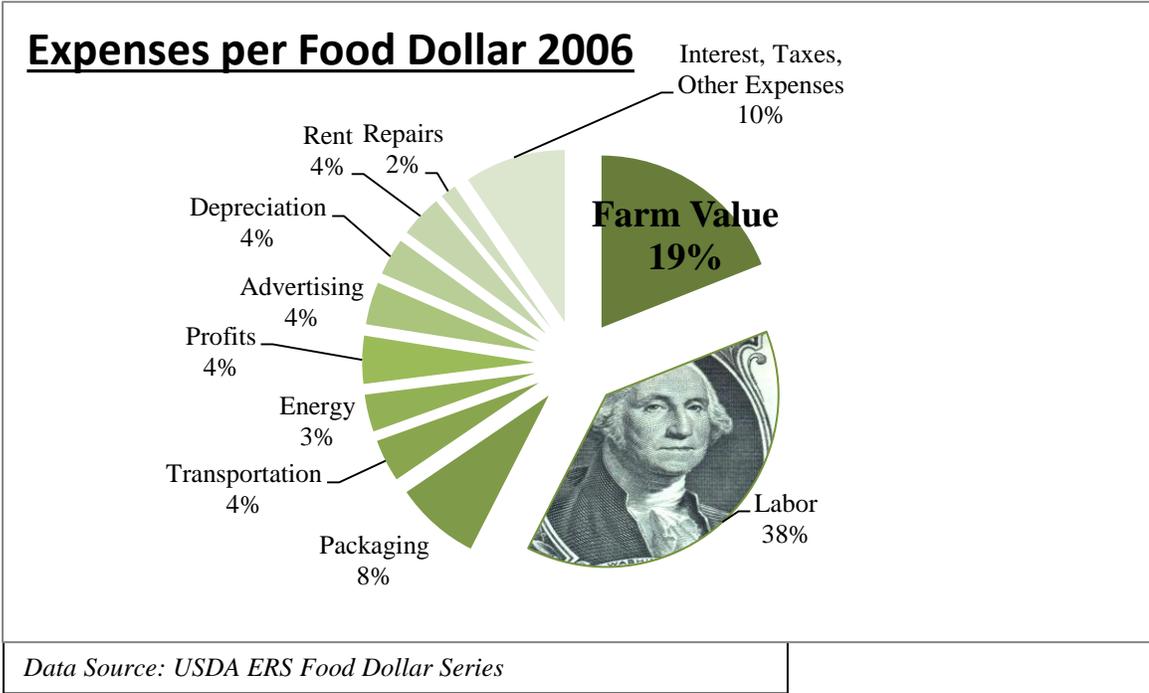


the money
going? The
term for it is
marketing; meaning
labor,
transportation,
taxes, fees,
packaging, profits,

energy, advertising, depreciation, rent, interest, taxes, repairs and other costs (**Figure 4.2**). The USDA has also changed the way it monitors where our food dollars go since 2006. It now uses an industry measure instead of an activity measure. The second chart in **Figure 4.2** shows the change, but also neglects to show that four more cents from each dollar are actually going to the farmer, they are just tied up in different industry classifications. The new breakdown does show more direct categories and helps people to really understand where their money goes (ie. not much to the farmer and decreasing).

Some of these costs go towards the basic needs of operating a processing or distribution company, but many of them occur due to value-added processing. This is becoming increasingly common in American society as consumers demand things on the go and other away-from-home food options. Farmers often cannot profit from the value added process unless they acquire equipment to amend raw product as well as time and

Figure 4.2
Where does a Food Dollar Go?

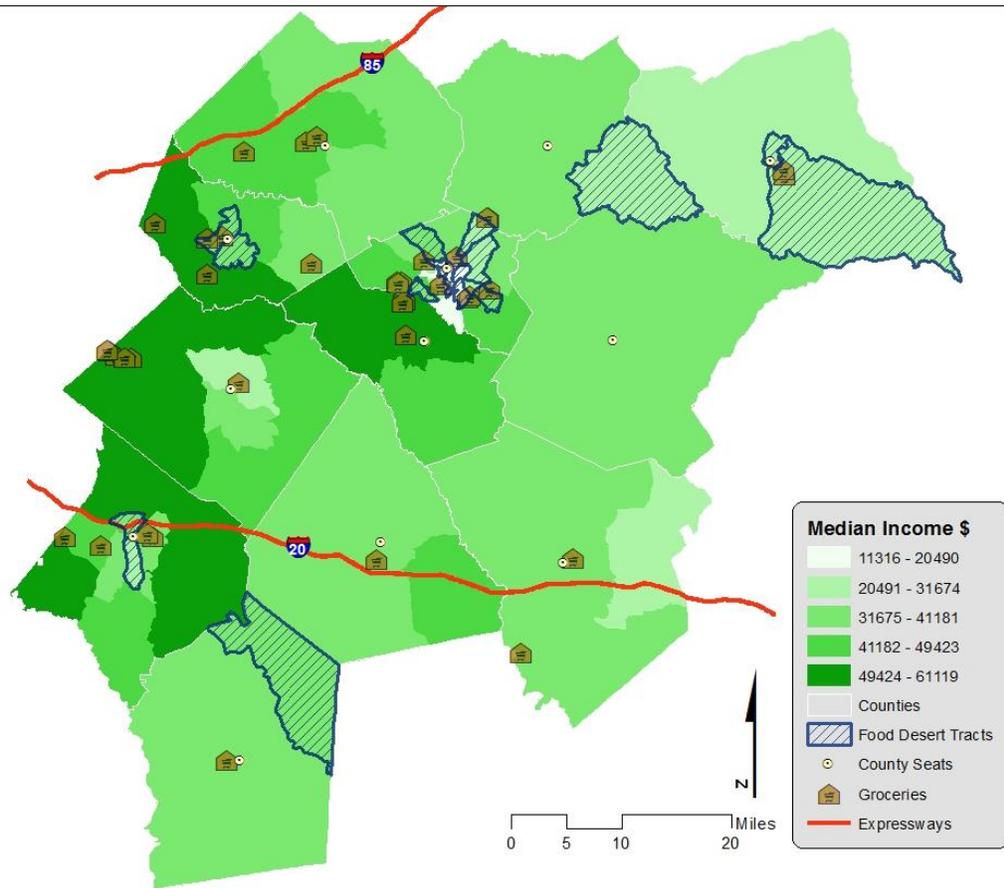


labor to accomplish those goals. Food hubs could potentially address these issues in order to keep more of that product dollar in a region and/or back in the farmer's pocket. The key is to find a balance where producers and processors can afford to grow a product or operate the machinery long enough to gain economic value from a harvest. Small scale meat processing facilities are having some success in that area along with CSA programs and local farmer's markets. The large processors are unlikely to be overtaken by any small start-ups, but a smaller, regional operation would give farmers another market for their products. The industrial food system has known for a long time that adding value to a product is one more step along that item's path to the customer that can mean more money for the processor^{xxxvii}. The regional food system can take on such a role, potentially allowing money to flow back to the farmer or at a minimum be captured by the local economy.

Section 3: Food Access

Much of the food debate in the world comes down to issues of access (*Figure 4.3*). This is true on a global level all the way down to a census tract level in the United States. Outside of the developed world, the issue of access deals more with people having sufficient resources to obtain appropriate foods for a nutritious diet^{xxxviii}. This problem arises from a variety of factors including, low economic standard of living, lack or resources to grow food, political strife, growing for export instead of subsistence (common throughout the developing world to enter the capitalist market) and many other factors that have shaped centuries of geopolitical struggle.

Figure 4.3
Food Deserts, Income & Groceries



Data Source: USDA Food Desert Locator and US Census 2010

The United States is slightly different because economically it ranks highly in per capita Gross Domestic Product (GDP) (8th in World Bank figures). The resources are certainly in place for Americans as a whole; however poor urban dwellers along with their rural counterparts have very specific transportation problems often combined with insufficient options (convenience stores, fast food and other nutrient poor possibilities)^{xxxix}. This has led to the concept of food deserts in America which as defined by the USDA to include census tracts that have low income and low access to nutritional food. According to the agency, low income means greater than a 20% poverty

level or median income 80% or below the surrounding area. In terms of low access, the definition is about distance to a major grocery store (one that supplies a nutritional diet, including fresh produce), either 1 mile in an urbanized area or 10 miles in a rural area.

In the northeast Georgia region we have^{xl} 19 tracts that are defined as food deserts, 11 of which exist in Clarke County. There also happen to be 41 major grocery stores, often in clusters and certainly around the larger cities; Athens, Covington, Winder, Loganville and Elberton. Distribution of grocery stores often follows the distribution of higher income level areas, based on census tracts. These are located in the western portion of the region, which correspond with the more urbanized areas of the Atlanta Metropolitan region.

Athens Clarke County has more food deserts because of its above average poverty rates, 34.6% or over 40,000 residents as of 2011^{xli}. The groceries in Athens tend to be around the periphery of the city with the poverty concentrated in the center and radiating north and east. Looking at the other food deserts in the region (*Figure 4.4*) there are six tracts around Winder, Elberton and Covington, then two rural tracts, one in Jasper County and one in Madison County.

Food deserts are just one measurement tool for looking into issues of food access, they tend to be broad because the data is at a tract level and only focuses on census-level poverty figures and percent proximity to a grocery. If you look closer it is possible to see that mass transit options are available in places as well as the fact that some people take advantage of growing their own crops, sharing with neighbors or purchasing from farm stands that are seldom reflected in census data. There are also many choices to make when it comes to food consumption including preparation time, knowledge and

willingness to eat more nutritious foods over the sweet and salty ones. People also have opportunities to experience the potential that is out there if they are able and bold enough to branch out. Those problems are often addressed through school programs, community programs and personal relationships with people that know how to cook and shop appropriately. Producers and suppliers are frequently attempting to address these problems as well with more nutritious options, farm to school programs, farm tours, obesity awareness campaigns, proper food labeling and more products^{xlii}. It is each consumer's responsibility to better understand what they put in their body, but it is also helpful for institutions to aid people in making those smart choices, especially children and undereducated populations.

Section 4: Consumer Resources

The national farm to school program has seized upon a variety of opportunities that seek to educate youth, provide healthier options, offer avenues for local farmers and connect the ways in which we consume food back to the means of production. The program offers free training and technical assistance, information services, networking, and support for policy and marketing activities. It is operational in all 50 states with 2011-2012 data showing \$13 million in purchased local food. The Northeast Georgia Region has 7 counties that participate in the program, while Georgia has 44 counties involved, many around the Atlanta Area and to the north, as well as a strong group in South Georgia, just west of I-75. Over 3 million meals were served across the state last year and this year's campaign is to increase that number to over 5 million^{xliii}.

Outside of schools, many municipalities have taken food issues to their residents through farmer's markets, mobile vendors and community classes. Classes often involve different ways to prepare food, assistance on following a shopping budget and access to the farms and produce in a given area. Many courses can be found through municipal departments (such as Leisure Services in Athens) as well as through county extension agents. Many of these courses are geared to be fun introductions and often work with parents and children together to provide the most impact on families.

Other agencies are also involved with nutritional assistance such as churches and non-profits. The Food Bank of Northeast Georgia is a major contributor to this region and handed out over 9 million pounds of food in 2010, this equates to over 7 million meals. They work with the needy, sick, elderly and child populations of the state to make sure underserved people are able to put some food on the table.

Section 5: Obesity

The United States has a different kind of growing problem that has nothing to do with farming practices, obesity. Obesity is classified as someone who has a Body Mass Index (BMI) of greater than 30 with overweight being between 25 and 30. It is now ranked as the number one public health threat, said to be responsible for 400,000 deaths and costing the national economy over \$100 billion per year^{xliv}. One way to track it and make change is to look at how it affects groups of people and regions of the country quite differently. Georgia is actually better off than most southern states (the most obese region statistically), but still had 28% of the adult population falling in to the obese category in 2011. Black adults (49.5%) are the heaviest group in racial terms, followed

by Hispanics (39.8%) and then Whites (34.3%). Black and Hispanic men are more likely to be obese at higher income levels whereas all women are more likely to be obese at lower income levels. The worst news is that all races, education and income levels are now more likely to be obese than when it was measured from 1988-1994.

Obesity can be attributed to many factors, chief among them eating a diet high in fat and calories, living a sedentary lifestyle or a combination of both. Obesity has also been linked to physiological factors and issues from one's genetic make-up. It is important to understand these problems because poor health due to high weight can affect childhood development and chronic disease^{xlv}. The USDA has put out nutrition guidelines for almost a century now and they are currently using a system called My Plate. For adults, they recommend 2 cups of fruit, 2-3 cups of vegetables, 6-8 ounces of grains, 5.5-6.5 ounces of protein, 2-3 cups of dairy and 6-7 teaspoons of oil per day. These are suggestions for average adult men and women, they represent typical portions.

The food system can play a huge role in how people fulfill the average daily intake, especially if people understand what goes into many processed foods^{xlvi}. It also opens the door for producers to deal in unprocessed foods and fresher food which have more nutrients. Programs such as the Farm to School platform help advocate for healthier foods in cafeterias and also get kids in touch with how food is grown to understand and not fear the process. Georgia is fortunate to have so much ability to grow fresh fruits and produce it would be great to see them take a lead throughout the Southeast in making its citizens healthier.

CHAPTER 5

Policy

Section 1: Federal Policy

Farm policy began at a time when many more Americans farmed on many more farms that were often much smaller than the average one today (Dimitri et al 1). A large disconnect in the food system stems from the fact that farm demographics have changed drastically while farm policy still mimics the old figures. Incremental change over time has led to subsidy programs that often support large farms with profits over small and mid-sized farms. Policy has also increased environmental degradation, food access issues, obesity, issues affecting the global marketplace and the detachment of consumers from the producers (Heien). Many of the farm policies put in place were to increase efficiencies, solve issues of shortages, increase safety or keep up with the industrial take-over, but have since become engrained to the potential detriment of our overall food system. An assessment of American farm policy can hopefully shine a light on the multi-billion dollar world of regulation and subsidies to benefit everyone who produces and consumes food.

The Agricultural Adjustment Act (AAA) of 1933 began the process of paying farmers to leave part of their land fallow and return some parity to agricultural supply and demand. That action was due to overproduction of land that had diminished the value of crops^{xlvi}. This was mostly from up-scaling^{xlvi} production during and after World War I that eventually was not needed when European farms returned to production. It was funded

by money from food processors, a practice deemed unconstitutional, but reinstated in 1938. The act specifically addressed wheat, corn, rice, peanuts, cotton, tobacco and milk which became mainstays of farm policy subsidies into the 21st century. The 1930's also saw legislation that sought to build better soils (product of the dust bowl) and expand grain reserves to even out fluctuations caused by bad weather.

Wars continued to affect agriculture prices in the United States as well as offer opportunities for American farmers to understand the global marketplace. They did not however solve supply issues that continued to keep crop prices below levels of parity. Farm bills throughout the second half of the 20th century did seek to reduce supply, often through conservation measures until Earl Butz, Secretary of Agriculture under Presidents Nixon and Ford, told farmer's "to get big or get out." This marked a large shift in policy that had sustained small farms and farmers through good years and bad. It scaled the industrialization of farming to astonishing levels, using vast amounts of petroleum and ushering in the truly global marketplace that now feeds off of a steady supply of commodity crops that are turned into value-added products^{xlvi}. The direct farm payments started back then continued into the 21st century, but now are being phased out for different subsidies.

Crop insurance in the US amounts to security that is unknown to most of us. If farmers have problems and crops fail, then they fall back on the insurance that is tailored to their farm while federal taxpayers cover up to 60 %^{xli} of their premiums and even more of the insurance companies operating costs. One may think this has something to do with tough times, but the insurance companies (not all American) have been posting profits for years. Last year, 7.3 billion dollars were paid out to 486,867 farms with more

than 10,000 of those claims being six figures and above (Holbrook). The rise in crop insurance is partly due to a decrease/reduction of direct payment subsidies to farmers that are currently being phased-out of farm policy. One difference between the two programs is that direct payments required farmers to follow conservation measures, but crop insurance has no such stipulation. A second major issue is who receives the subsidy, most often it is the large profitable farms getting an extra handout and not the people who have to rely on off-farm income to earn a living (Holbrook). Recently fruit and vegetable farmers have been accepted in to the program, prior to this only commodity crop farmers were eligible to receive this risk management tool.

Farm subsidies also tend to go toward commodity crops that can feed into the food system, but also aid in the production of many other products (gasoline, animal feed, clothing or tobacco). This is part of the agricultural production system now in place in America. Farmers more often navigate the world of business and the global marketplace instead of just producing food, fiber and fuel supplies.

Section 2: Northeast Georgia Plans

Regionally, Northeast Georgia shares a lot of common agricultural history and preserves much of it to this day. The comprehensive plans of each of the 12 counties show interest in preserving a combination of natural areas, environmentally sensitive land, forests and agricultural land. The most common practice for doing this is to not extend services (sewer & water) into areas of the county that would be best suited for agricultural uses. Some counties also discuss concepts like limiting leap-frog

development from city centers in order to not break up the outlying agricultural/open areas of their counties (Madison specifically, Athens-Clarke in theory).

The counties also use zoning to restrict development to either 1 unit per 5 or 10 acres (in rural zones) in order to preserve that open character and to limit rural subdivision growth. Many of the counties do show acceptance of rural growth, but often have limits that require consolidation of residences on large tracts of land in order to preserve space around that development. Another zoning tool that is mentioned is to require non-conflicting uses adjacent to agricultural land through either buffers or industries that support agri-business. This idea could provide two routes to agricultural preservation through retention of productive land and corresponding businesses that will process, store or transport those products throughout the region and beyond. Another regulatory option that some counties have adopted is a percentage of land to keep open, forested or agricultural in order to understand where future urban growth should occur. Counties in this region have figures in the 20-30% range. Carroll County, Georgia has specific language to this effect in their Comprehensive Plan in *Appendix A. Chapter II. Natural and Historic Resource Elements. Section I. Greenspaces*¹.

Preservation can occur through non-regulatory measures such as identification of prime agricultural land and agricultural zones or promotion of that facet in a county. When counties take a proactive role to demonstrate where agriculture can be best versus where urban growth would be best they can guide future development to make more comprehensive decisions. Displaying how a future development would benefit from being in one portion of a county versus another allows a developer to have more information that is in line with the local goals.

There are some newer practices that also seek to retain agricultural land throughout the region such as Transfer of Development Rights (TDR) (*see Glossary*), Purchase of Development Rights (PDR) and Conservation Easements. All of these regulatory tools can use monetary inducements for developers to retain open/forested/agricultural land and thus preserve it through market functions. These tools are being explored in many of the counties that have higher populations, but will also be helpful in the rural counties as the region continues to grow in population. In fact a few of the counties have not addressed agricultural retention due to their limited growth, but all of the counties express interest in the future preservation of open space, forest and agricultural land.

There is very little information about alternative farm operations or markets and almost no mention of urban agriculture in the 12-county region. Bolstering the regulatory framework for urban agriculture can provide new opportunities to increase localized production and distribution. Policies that affect farming practices could benefit local economies and allow for production closer to a processor or end consumer. Jackson County does specifically address warehousing in their comprehensive plan due to the 20 miles of Interstate 85 that pass through their boundary. There currently exists many large warehouses in that region and while they take up a large footprint with a low number of jobs, there is potential for secondary economic benefits from having such a resource so close to areas of agricultural production. Other counties (especially ones along I-20 and I-85) do address industrial parks in their comprehensive plans and mention the potential for warehousing or light industrial uses that could include food processing, but none set specific goals for those industries.

Section 3: Positive Regulations for Agriculture

Land development and agriculture are often at odds when the development pressure gets larger and denser. In order to preserve lower impact uses (agriculture, forests, open space & conservation) it is important that counties and regions recognize the benefits of both and understand how these at times incongruous uses go together. The idea of putting complimentary uses adjacent to farming is great, but the region's population can only support a limited number of those facilities so other options must be available. It is also important to take a proactive approach because once development starts it is harder to place zoning restrictions on pieces of land because they can affect the profits to be gained from selling that land for development^{li} and legal actions may ensue.

One potential solution that could work in conjunction with a conservation easement would be a program that buffers agricultural uses. Preserving underused land around agricultural zones could retain beneficial environmental characteristics as well as retain portions of a county in conservation. If a county wants to get serious about preserving open space or agricultural land it would be wise to do it in conjunction with other similar properties. They could also take the approach that conserved land buffers agricultural well while at the same time that land in production would benefit from having clean resources around it. The Florida Forever Act^{lii} deals more with preservation of natural resources and environmentally sensitive areas, but could be used as a model for retaining quality land and keeping it clean for potential agricultural use in the future. That act has changed to a competitive process which seeks to retain the highest quality land and areas near environmentally sensitive features in order to have the most impact^{liii}.

Such a system in Georgia could prioritize a percentage of land adjacent to future agricultural locations which displays a commitment to farming as the urban boundaries expand.

One path to take is passing right-to-farm legislation that often protects farm operations in the case of a nuisance complaint (*see Appendix #5*). The Model Right-to-Farm Ordinance takes steps to inform parties ahead of time that commercial farming can produce negative secondary effects, but has an overall benefit to the community and is held as a priority. It also lays out a process for aggrieved parties to have an issue addressed and settled by negotiated means. Georgia has a statewide Right-to-Farm statute which states that no agricultural facility can be declared a nuisance, it does not however layout the process to mediate conflict^{liv}. While the ordinance specifies certain side effects of farming it does not allow the farmer to run all over adjacent development and therefore has a sense of balance. Enabling counties or regions with this type of legislation shows a commitment to farming, but also understands the importance of development.

Another option for counties or regions is to adopt a farmland preservation plan that discusses resources, existing conditions and where to go in the future. All of the counties in the Northeast Georgia Region display where they believe future agricultural operations will be, but none of them have binding legislation requiring those lands stay agricultural. One tool that a county farmland preservation plan can use is to set a preservation goal annually or per decade which then must find money and land to meet that goal. These goals can often coincide with smart growth goals that many municipalities are putting in place to contain sprawl (such as Athens-Clarke and Newton

counties). Counties can also enact agricultural districts that place farming as the primary use for a set area and then rely on percentages to keep that zone predominantly rural, this can also be accomplished through a “Purpose or Intent Statement” for the district.

Incentive zoning has been discussed throughout this paper (TDR’s, Conservation Subdivisions for example), but placing it into a zoning code is one way for the county to actually influence future development. There is a theory that just having minimal limits to lot sizes or dwellings will keep out unwanted development from agricultural areas, but it can also break up the land to the detriment of large scale farming. Some folks will refer to this as the “death by a 1,000 cuts”^{lv} which can lead to scattered development that poses many problems a kin to suburban sprawl. Incentivizing compact development or growth adjacent to existing infrastructure is one way to protect large portions of open space or farmland for potential future agricultural use. Putting language into the zoning code that allows the planner or board to encourage/require cluster development is another step to making the code friendly to agriculture and still available to developers, North Carolina has done just that with their Conservation Subdivision Handbook^{lvi}.

Urban agriculture is not much of an issue throughout the Northeast Georgia Region, but local codes can take steps to not deny such activity. Local sourcing of food is a trend on the rise and having the ability to reuse vacant space in cities is just one more option to create a regional network that addresses the needs of many^{lvii}. Technology has also been improving ways to produce food in buildings or other structures, on water or rooftops and having codes in place that limit urban agriculture could potentially halt such evolutions. There are certainly limits to urban agriculture and issues to address (roosters, livestock, foul odors, etc.), but the idea would be to not shut to door on potential growth

that could place consumers much closer than the average 1,500 miles that we currently are from our food.

Creating policies that work for agricultural uses and farmers as well as development can be a tough act to balance, but is not impossible for a county or region. A key is to look at the local code and ask; who or what uses is this code geared for? If the answer is simply future development (as many people have contended for years) then it is time to take a second look and see how we can keep agriculture in mind. Taking some of the proactive steps recommended above is one way to show the agricultural community that you understand their issues and seek to make them a part of the overall plan. It also opens up opportunities to preserve land, keep growth inside some accessible boundaries and enable a jurisdiction to serve all the uses that make up a more sustainable county. During this process it is still necessary to understand the monetary value a farmer has tied in their land. Finding ways for them to recoup that value, especially when it comes to retirement is one more piece of this evolving puzzle.

CHAPTER 6

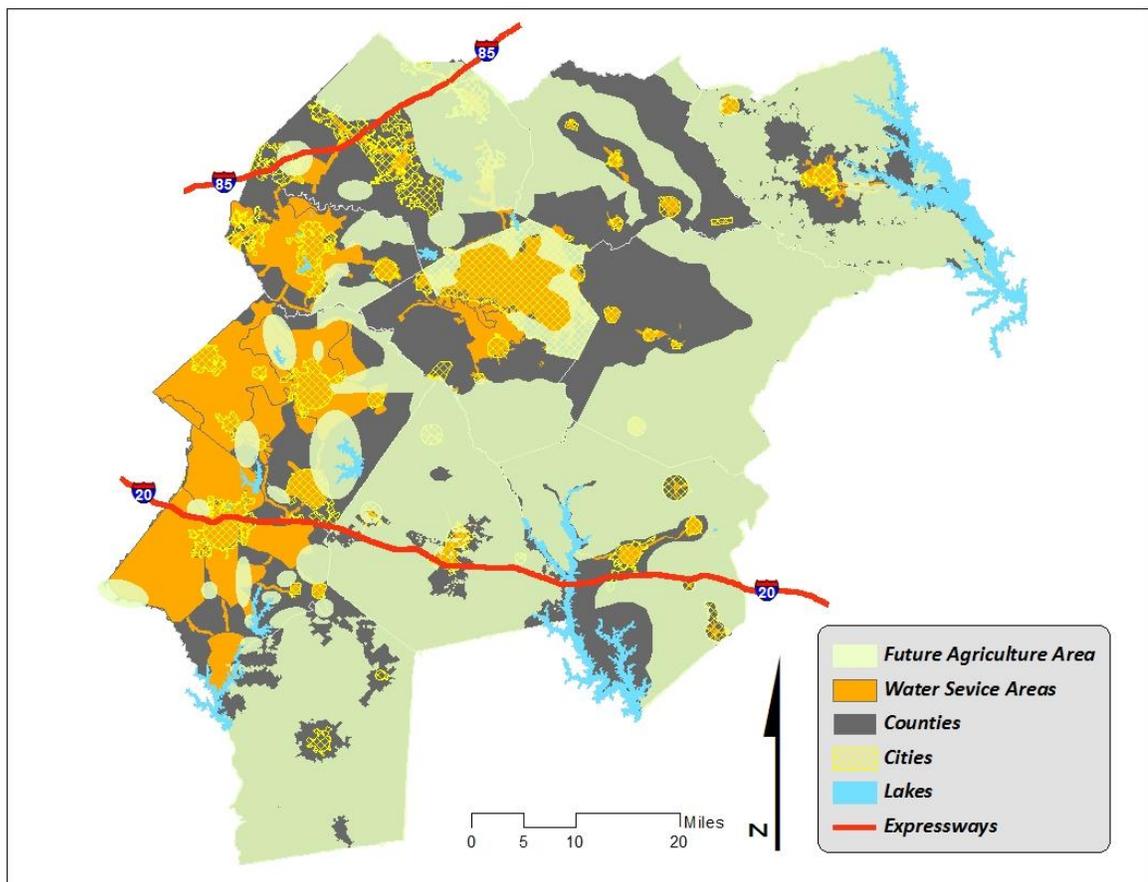
Conclusion

The Northeast Georgia Region has resources and infrastructure to make strides forward in the world of agriculture. The region should put the tools in place to preserve land for future agricultural production, work with the transportation options that are already in place and find opportunities to bolster local distribution. The region has protected large portions of many counties for agricultural growth and each one has

unique opportunities (*see Figure 6.1*) to

expand their production and play a

Figure 6.1
Areas for future Agriculture & Water Service



regional role. The map uses information from the 12 county comprehensive plans pertaining to where they would like future agricultural growth (the total area is over 50% of the region). It is contrasted by where urban growth has occurred and where water will be supplied which displays a good step in retaining agricultural space. As a regional guide it can steer development and production agriculture in sensible directions to allow prosperity down both paths.

In terms of production, the region is heavy on poultry, livestock and aquaculture operations which are great to provide foundation for the agricultural economy. Going forward, Northeast Georgia should continue to diversify production in order to supply more citizens the products of a rounded diet. The rise of alternative farming is another great option for the region to capitalize upon because of its proximity to Athens, Atlanta and Augusta. Many conscience buyers live in the urban markets and specialty grocery stores or restaurants are located in the population centers as well. As indicated by regional farmer's markets, distribution to the less urban counties is also a good option and can be serviced throughout the region. One important point is that no individual sector will really benefit the region best (although poultry is trying); it takes a combined effort and balance for a truly localized system to serve its populace.

Infrastructure options that can link Northeast Georgia to population centers and the country are the vital connection that needs continued attention. Interstates are currently the easiest option to send produce out of the region and having them not only connect to Atlanta, but also spread northward and southward makes it even better. Ideally, the region can support an aggregation facility or two and my proposal recommends one in Jackson County (I-85) and one near the city of Madison in Morgan

County (I-20). The two facilities could function for meat production and for all other farm products. Athens locally Grown currently has over 150 suppliers with more than two thirds of them in the Northeast Georgia region. Those numbers are above many food hub operations that I surveyed and could be the foundational producers for a regional aggregator. Currently, they are supplying individual customers and restaurants which leaves open the possibility for accessing the institutions and retail outlets.

There are currently many facilities along both of these corridors that could support warehousing, processing and transportation as well as labor demands to operate such a place. A spoke and hub system could work well for the eastern counties due to centralized county seats that could combine loads and distribute to the actual hub. Madison and Morgan County are already looking into a Food Hub^{lviii}, which would be a great business structure to help money circulate through the local economy, but a more conventional warehouse or processor could also serve in place of a hub. They are also focusing on meat production which would help some producers, but not the growers. Future collaboration could make the hub more diverse or even open up the opportunity for two specialized hubs in the region (meat in the south, plant production in the north). On the northside of the region the strides are being made towards a grower Food Hub, but details have not reached the level of work in Madison and Morgan County. The interstate Highways will continue to play a large role for the region. Facilities need to be located near the producers and it would be wise to site processing, warehousing or distribution establishments in places that reflect the need for balance.

The region already offers diversity in production, but few of the counties have maximized their economic impact and much of the land continues to be underutilized.

Broiler production in the northern counties has major money and infrastructure behind it, but often sees the profits find their way back to the integrators (outside the region). Other niches have formed throughout the counties, but an integrated network has not risen from these varied parts. Aggregation facilities that service institutions or groceries require cooperation from producers and distributors, so instituting such a business arrangement will force the region to become more of an integrated network. Hard work from diligent operators such as Eastern Carolina Organics led to growth from that sector throughout North Carolina and positive growth for the farming industry. Food hubs are only a piece of the puzzle and truly need to be guided more by the market which is growing and could be further leveraged by some economies of scale. While something like a food hub gets off the ground, it is important for jurisdictions to begin preserving space and infrastructure that will be available for future production.

Railroads also have a role to play and historically were tied to agriculture quite well. Currently they are used for larger shipments and would require a large up-scaling in production to be a viable transportation option. The constantly rising costs of energy have given rail a boost in current thinking and may in the future present it with an economic advantage. The 2 CSX lines run through Athens and along the I-20 corridor and offer the chance at a central aggregation location as well as a multi-modal facility near the city of Madison. The use of rail will require some facility one way or the other because it lacks the direct linkages to farms that Interstates and highways can offer.

Another way to capitalize on past practices that are making a come-back is to use animal waste in more constructive ways throughout the region and state. Creating the

links between animal operations and the farmers who need fertilizer is a simple step in closing a loop in our food system while also repurposing waste.

Nutrition is a focus of the national food policy discussion and taking some of the processing out of our diets is one way to limit unnatural inputs. Major corporations who earn a living off of value-added processing would have the most to lose and this is evident in their marketing efforts which in the mid 2000's were over \$36 billion annually^{lix}. Combatting those efforts are government agencies, health associations and concerned non-governmental groups spending minor fractions of that figure and pushing for a switch to include more whole foods in the daily American diet. That change would be one of the biggest drivers of a local food system and if the Federal Government will not take action then our local growers need to keep educating consumers, especially youth, create viable production streams and get to people's hearts via their stomachs.

Food access and education are one other area that needs great attention and I believe that getting people more in touch with production is a simple way to address both concerns. Making people aware of complex food production is and showing them how gratifying the process can be are ways to reengage people and plants. Giving people the desire to care about their food through celebration and providing them the tools to keep their families healthy are small steps that can turn the nutritional imbalance around. Jurisdictions should also reward people in underserved areas for making better choices in food selection through reduced public transit fares, vehicle pooling, access to second harvests or mobile distribution. Public health is consistently becoming intertwined with the food system and addressing issues at the root and in generational fashion is a way to change the downward trend.

The western counties in Northeast Georgia are truly at a point where they need to decide if they will continue on a path that includes agricultural production. Their proximity to Atlanta should favor this decision in a positive direction for the agricultural community and allow them to serve local populations as well as beyond. In order to accomplish economically viable levels, these counties need to start looking at urban growth limits or agricultural/rural conservation practices. Of all 12 counties in Northeast Georgia, Newton County has been one of the most proactive in limiting urban expansion to the eastern portion of the county. They have developed areas for growth to occur and areas for open space, forest or agriculture to continue. Newton County has used the comprehensive plan to fulfill this task which is a simple way, yet also reflects the option to amend the plan as times change. The flexibility is needed to accommodate certain opportunities in the future, but should also not be disregarded if land preservation is truly a goal of the county.

Other counties have also set minimum allowances to the amount of agriculture they would like to see continue and that strategy is another flexible tool for counties to locate proper development and intensities in wise locations. The counties often place restrictions on certain land types (environmentally sensitive, prime agriculture, etc.) which also help to guide development away from space that could best be used to farm. All counties should have specific language in regards to this tool because it is a first defense to preserving rural land as well as protecting resources in the counties such as soil, waterways and uncontaminated land.

Another legislative tool that should be explored by the counties in Northeast Georgia is a Right-to-Farm Ordinance. These laws protect farmers on primary issues

related to the practices of farming especially in the case of new development moving into an agricultural area. We have long determined in this country and state that farming is a very necessary part of our economy so protecting farmers is easy to understand. Right-to-Farm laws can also help to spread or separate uses in a county to limit conflict that has arisen for centuries between people and production. Separating uses goes against current planning practices in cities, but can be a huge benefit to agricultural portions of the U.S. as it preserves and groups farms. Transportation and processing operations could benefit from concentrated farming that has been set aside and grouped in order to produce crops in the least invasive way possible. Right-to-Farm laws can also allow for farming in more urban locations which is a growing trend in America and popular throughout much of the world. When we give people more opportunities in a system that seeks to work cooperatively then we end up with more outcomes and increased potential for solutions.

A local food system is not something many places can sustain, but Georgia offers many resources and a growing population to certainly work towards that goal. Combining the thoughtful conventional producers with the risk-taking alternative farmers and building community resources or knowledge are ways that Northeast Georgia can progress towards a regional system. It will take much coordination, but that opens an opportunity for each portion of the region to put its own unique stamp on a system that will make the whole stronger than the parts.

Section 2: Further Aspects to Research and Analyze

This report has taken a deeper look into the production and infrastructure data that is available across the region and state. One key area it does not explore too much is the

aging farmer population that has been increasing since the 1970's. Work needs to be done to better understand how to get youth involved with the agricultural sector and keep farms active as older generations retire. Farm succession plans are one path, but reinvigorating the industry could be likely to gain the interest of a broader audience.

Data is an integral part of research for a report such as this one, yet very hard to compare on a regional scale. GIS analysis was most hindered by a lack of consistency that would have allowed more insight to farm level information across the region. A system that compiles basic information in a consistent way would truly benefit research being done on a regional, state or national scale. A group such as the Northeast Georgia Regional Commission could facilitate such improvements by setting up a template for the local planners and technicians to follow.

The food movement has caused many people to purchase more in line with their values as well as prepare wider ranges of foods and I believe that same energy can be put towards farming and agricultural production. Hopefully successful programs such as farm-to-school are picking up where past programs like 4-H and Future Farmers of America were used to introduce youth in the industry.

Food hub research and growth is another area that needs continued attention and continued support. In a short amount of time, many hubs have created jobs and markets that would not have been possible just a decade ago. As food hubs grow, find their place in the market and open up opportunities for producers they need to continually focus on goals and provide the cooperation that motivated them in the beginning. They need to continue their push for financial viability while also building the communities that they support and call home. As their distribution networks grow it will be important keep

their comparative advantages of quality customer service, accessibility, commitment to local production and basis in the community.

Regional food systems also need to be committed to underserved populations through programs such as Wholesome Wave, educational opportunities and making healthy food accessible to everyone. One aspect that tends to be forgotten is the option for people to take a direct role in production through volunteering at farms, participating in crop mobs or being involved in a second harvest program. Many smaller farms are happy to supply extra hands with produce to take home after some assistance or potentially educational experience to grow their own food. Second harvest programs should be promoted much heavier among underserved populations who can take the time to reap the leftovers after commercial picking. This is not always an option, especially for families who have to work multiple jobs or lack transportation, but it can be an option for farms or community to pair up with citizens truly make an impact on the people most in need.

Appendices

Appendix A: Glossary

Biodynamic Farming^{ix}- A concept of agriculture that sees the farm as a living, dynamic, spiritual entity and attempts to bring it into balance. The Demeter Association establishes the specific guidelines for Biodynamic production and certification. While generally regarded as a type of organic farming system, Biodynamic agriculture is considerably more rigorous.

<http://www.biodynamics.com/>

<http://www.demeter-usa.org/>

Certified Organic- The United States Department of Agriculture (USDA) certifies farms and processors that produce/use products that are free of irradiation, sewage sludge, synthetic fertilizers, prohibited pesticides and genetically modified organisms. There are multiple levels of certification as well as exceptions that can be further understood here: www.ams.usda.gov/AMSV1.0/nop. It does require meeting initial standards with inspectors and potential future random checks.

Certified Naturally Grown- This is a program that builds off of the USDA's Organic standards and uses a peer-reviewed system to certify farm practices that benefit the land, animals and organisms that contact farm production. It is lower in fees and regulations than the national organic program which makes it much more attainable for small farmers and direct to customer farmers. Exact specifications and standards can be found here:

<http://www.naturallygrown.org/programs>

Chemical Free Farming- Just as it sounds, farming without the use of chemicals and utilizing well established techniques of crop rotation, companion planting and use of natural adjuncts like manure. This technique of farming is popular with folks supplying local markets, the European Market and even people who see chemicals as expensive. It is being done on a large scale in some places, but also by people who see the excess production of certain crops as a factor in driving down the value of that product.

Community Supported Agriculture (CSA) - This is a blanket term which is often substituted for what might more specifically be called a consumer box program (see reference), but not exclusively. CSA's are often arranged to provide payment at the beginning of the season- when a farmer really needs it- and then customers are promised a "share" of goods each week through final harvest. Customers generally are required to pick up the share at a central location, but some do deliver.

Conservation Easement- A regulatory tool that aims to preserve land with minimal development for environmental, historical, aesthetic or growth containment reasons. Conservation easements will stay with the land into the future even if it changes hands. This tool allows a jurisdiction to preserve land to aid the overall community for environmental remediation or preservation and compensates the landowner through tax deductions.

Consumer Box Program- These programs often work by the consumer paying in bulk to a farm which then provides a "share", often one box of produce each week which varies by season and represents what the farm is producing. Some models do allow the consumer to pick from a list or group of products in place of just receiving what the farm would provide. Similar to CSA's, these programs often require some effort on the part of

the customer to pick up the produce and also prior payment to help the farmer's costs when they actually occur (early in the season).

Heritage Breed Livestock & Poultry- A non-profit guided program to preserve historic and endangered breeds of livestock and poultry. They are preserved to sustain biodiversity into the future and to provide choices for farmers and consumers that might otherwise be lost. Their aim is to accomplish this through conservation and production because if producers continue to utilize these breeds the system will keep them around without outside help.

Locally Grown- This term means a lot of different ranges to a large amount of suppliers. A common round number is within 100 miles (such as Athens Locally Grown), but other ranges include a state boundary (such as Georgia Grown) which partly used due to economic and political constraints and some people think local is within a half days drive because a farmer can get there and back in the same day. This term is not always about distance or time, but often about a commitment to the regional economy, reducing one's food miles or revolting against the industrial food system. It has also begun to be studied by economists due to its small scale and potential increase in petroleum consumption versus major producers who ship in bulk and by more efficient means at times.

Local Vendors Coalition (LVC)- Founded in Georgia, the LVC is an online farmer's market for individuals and wholesale buyers to purchase local produce. There are currently over 20 vendors selling fruits, herbs, nuts and vegetables from Georgia and Alabama. The coalition helps vendors with marketing, packaging, networking, insurance and information.

Principal Operator- This is the term used for a person that runs a farm, it is helpful for census purposes to determine race, gender and age of people running farms. It is also used to breakdown farms by family run vs. corporate. Farms can also have secondary operators that manage duties; this typically refers to family farms with multiple relatives working for the business.

Protected Harvest- an independent non-profit organization that offers a Certified Sustainable label to growers. This program stresses the social and environmental aspects of sustainable agriculture, and Includes the use of biointensive IPM. The certification requires a third party audit and an on-site Inspection. Standards are specific to the crop and region.

Purchase of Development Rights (PDR) – An economic development tool where a jurisdiction will pay a landowner to keep their property minimally developed (agriculture, timber, forest, conservation, etc.) to restrict further urban growth. The transaction is a negotiation that may place specific policies on a landowner (such as small-scale development that won't defy rural character) and will preserve the land indefinitely into the future. Often the cost is the difference between an appraised land value if developed and the value if left in conservation. That money can benefit a rural landowner that has equity tied up in their land yet could use the cash for other reasons. This tool benefits municipalities through land preservation, growth constriction and retention of natural, sensitive or agricultural land.

Regional Commission- Georgia is broken up into 10 regional commissions that focus on regional issues concerning local government and to be a resource for the jurisdictions.

They engage in local government planning, economic development, grant preparation, administration, job training and aging services

Transfer of Development Rights (TDR) - An economic development tool that creates “sending areas” (land to be preserved as open, forest or agriculture) and “receiving areas” (developed areas that can incur more density/increased development). A development in the receiving area pays a fee to an owner in the sending area to be able to develop beyond a zoning limitation; in exchange the owner in the receiving area gets a restriction on their deed to not develop their land further. This preserves areas in a jurisdiction that are rural, environmentally sensitive or open and allows for more development in an urban region that already has services and market demand.

Value-Added Product- Raw products leave the farm at which point they may be sold whole or altered in a variety of ways that add value to the consumer. Value-Adding come in many forms; rinsing and packaging is the simplest, freezing is another way to extend a products life and then there are a variety of ways to process raw products into new foodstuffs or meals. Some of the more technological companies will create things like High Fructose Corn Syrup (to be used further in food), Ethanol or Lean Finely Textured Beef. Many of these processes are products of the industrial revolution and have created a complex, convenient and energy-intensive food system to create more monetary value out of each raw product.

Appendix B: Farm Types

Definitions and Figures are from “America’s Diverse Family Farms” Report 2010^{lxi}

Farm Types 2007

The farm classification developed by Economic Research Service (ERS) focuses on the “family farm,” or any farm where the majority of the business is owned by the operator and individuals related to the operator, including relatives who do not live in the operator’s household. USDA defines a farm as any place that produced and sold—or normally would have produced and sold—at least \$1,000 of agricultural products during a given year. USDA uses acres of crops and head of livestock to determine if a place with sales of less than \$1,000 could normally produce and sell that amount.

Small Family Farms (sale under \$250,000)

- **Retirement farms.** Small farms whose operators report they are retired, although they continue to farm on a small scale.
- **Residential/lifestyle farms.** Small farms whose operators report a major occupation other than farming.
- **Farming-occupation farms.** Small farms whose operators report farming as their major occupation.
 - **Low-sales.** Gross sales less than \$100,000.
 - **Medium-sales.** Gross sales between \$100,000 and \$249,999.

Large Scale Family Farms (sales over \$250,000)

- **Large family farms.** Farms with gross sales between \$250,000 and \$499,999.
- **Very large family farms.** Farms with gross sales of \$500,000 or more.

Non-Family Farms

- **Nonfamily farms.** Any farm where the operator and persons related to the operator do not own a majority of the business.

Statistics on Farm Sizes and Production

- ❖ Eighty-eight percent of farms are small, and these farms account for 64 percent of farm assets, including 63 percent of the land owned by farms.
- ❖ Large-scale family farms and nonfamily farms account for 84 percent of production.
- ❖ Family farms of different sizes account for 98 percent of farms and 82 percent of production.
- ❖ Commodity program payments reflect acreage in crops historically eligible for support; 76 percent went to family farms with at least \$100,000 in sales in 2007
- ❖ About 60 percent of working-land conservation payments went to large-scale farms since these programs target production—although indirectly—by targeting environmental programs on lands in production
- ❖ Land-retirement programs, however, target environmentally sensitive land—regardless of its production—and retirement, residential/lifestyle and low-sales farms received 73 percent of these payments
- ❖ The share of farms receiving Government payments is particularly high for medium-sales small farms and large-scale farms, largely due to their participation in commodity-related programs.
- ❖ **Farming is still an industry of family businesses.** Ninety-eight percent of farms are family farms, and they account for 82 percent of farm production
- ❖ **Small farms make up most of the farm count and account for the bulk of farm assets, including farmland.** Most farm production, however, occurs on large-scale and nonfamily farms
- ❖ **The nonfarm economy is critically important to operators of small family farms.** Because small-farm households rely on off-farm work for most of their income, general economic policies, such as tax or economic development policy, can be as important to them as traditional farm policy
- ❖ **Twenty-eight percent of U.S. farms have a principal operator at least 65 years old.** Most of these older operators, however, are on retirement or residential/lifestyle farms that produce only 2 percent of U.S. farm output. In addition, some larger, more commercially oriented farms with older principal operators are multiple-generation farms, with a younger replacement operator in place
- ❖ **Different farm policies affect distinctly different sets of farmers.** Commodity program payments largely flow to medium-sales, large, and very large farms; most working-land conservation payments go to large-scale farms; and land-retirement payments go to retirement, residential/lifestyle, and low-sales farms.

Most farms, however, do not receive government payments and are not directly affected by them.

Distribution of Farms^{lxii}:

Farm Type	Farms	Value of Production	Farm Assets
		<i>figures are percent of U.S. total</i>	
Small Family Farms			
Retirement	18.4	1.6	12.9
Residential/Lifestyle	45.1	4.2	26
Farming-Occupation			
Low-Sales	19.8	4	17.3
Medium-Sales	5.1	6.6	7.9
Large-Scale Family Farms			
Large Family Farms	4.3	12.2	9.3
Very Large Family Farms	5	53.7	20.1
Nonfamily Farms	2.4	17.7	6.6

Appendix C: Food Hub Case Study

Eastern Carolina Organics

(ECO)

Durham, NC

Established in 2004



- As of early 2013 they are now located in a 25,000 ft² warehouse that is shared with other environmentally minded businesses. They plan to expand in the building as they grow, but right now rent out the room to help pay for the investment of a larger structure.
- 2 trucks (14' & 24')
- 3 walk-in Refrigerators (room for a pallet jack to maneuver)
- 6 employees (4 managers, warehouse packer, delivery driver)
- They work with 40 organic growers and supply 100 customers
- \$3 million dollars in sales 2012

The organization is responsible for marketing, organizing and distributing produce from their growers to store, restaurants and buying clubs. They were founded with a \$48,000 grant from a tobacco settlement, but quickly formed plans and became a private company in less than a year. The arrangement was set-up during one daylong meeting between 2 owner-employees and 13 growers. It is now overseen by a rotating board of 3 farmer-owners and 2 employee-owners. ECO has an 80/20 split for their finances with the growers getting the bigger percentage and the employees earning 20%. They also pay dividends to each owner (farmer or employee) on an annual basis.

They have consistent contact with suppliers including pre-season arrangements for product varieties and amounts to be grown. This allows them to supply a wide range of products, from all their sources on a regular basis. They bid out prices each week to

purchasers, receive orders, contact the growers about what to harvest, receive the produce and ship within 1-2 days.

They deliver to points across the state of North Carolina and also place orders on transit trucks with extra space to be delivered along the east coast and even in to Canada. Currently they leave products source identified, but are looking to package items with the ECO brand, yet still identified by the producing farm. They do not break up orders, each product is packed by the caseload and when an order needs more than the amount supplied by one farm they will combine cases from multiple farms with the identity intact. They are also realistic with farmers to not deliver produce if the amount will not be profitable, they do work with small operations as low as a few acres. ECO also supports farmers with assistance and information as well as encouraging other markets for their growers and farmers using sustainable practices in the area. They believe that onsite retail would compete with the local markets in town want to be a part of the non-industrial food system instead of overwhelming it in Durham. Educating growers and purchasers is a big part of their business and while some folks have tried ECO and left, many of the people they deal with adapt and work within the balanced system that requires vigilance and constant communication.

Appendix D: Food Distributors in the Region

1. National

PFG- Local hub in Oakwood,GA; 69 distribution centers

Sysco Local hub in Forest Park, GA; 180 distribution centers

U.S. Foods- Local hub in Norcross, GA; 60 distribution centers

Sea to Table- Closest port is Port St. Joe, FL; Catches fish sustainably across North America and overnights the products to locations across the US

2. Regional

Atlanta Foods International (part of Gourmet Foods)- 4 locations in Atlanta, Denver, Lakeland, FL & Pompano Beach, FL; serves AZ, CO, FL, GA, NM, NV, UT & Caribbean

Destiny Organics- Based out of Forest Park, GA; serves AL, FL, GA, NC, SC, TN

Royal Produce- Based out of Atlanta; serves a range from Chattanooga to Albany to Augusta, just over the border of South Carolina and North Carolina as well as a corridor to Montgomery, AL

Southern Foods- Based out of Bowling Green, KY; serves AL, AR, GA, IL, IN, KY, MO, MS, OH, NC, TN, VA

Freshpoint- Local hub in Forest Park, GA; serves AL, FL, GA, KY, NC, SC, TN, also has regional hubs around New York City, Denver, California, Texas and Vancouver

Inland Seafood- Based out of Atlanta with 3 other distribution centers; serves AL, FL, GA, LA, NC, SC, TN, VA

Sutherlands- Based out of Forest Park, GA; serves AL, GA, SC, TN

Greenwood Ice Cream- Based out of Atlanta, GA; serves Southeast US

Mayfield Dairy- Local Hub in Braselton, GA with second hub in Athens, TN; serves

AL, FL, GA, KY, NC, SC, TN, VA

3. Local

Market Fresh- Based out of Bogart, GA; Serves Athens and Winder

This is a list of distributors to restaurants in Athens and the University of Georgia from interviews with Chef Chris McCook, Chef Chris Rountree & Executive Director of UGA Food Services Jeanne Fry. There is also information contained here from Eric White (Sales representative for Whole Foods, warehouse in Braselton, GA).

Food distribution is a huge business with companies like Sysco having annual sales of \$37 billion dollars. The broadliners, as companies who carry every kind of product are called, compete across the nation on a weekly basis with operations large and small. Prices fluctuate every week and are posted for purchasers to see and bid on food constantly. This creates an intricate balance for each food operation to maximize their potential profit as well as provide quality they trust. Most chefs prefer certain products from certain providers as well as affordable prices on items they will transform. There is also a large service component to each distributor in their relation to each restaurant. Some will charge a fee for small orders or charge gasoline tax if the purchaser is not buying enough. The providers also have an upper hand in when they will distribute to each restaurant throughout the day which can leave chefs in a bind if their product is not in their kitchen as early as possible. This is all part of the balance that occurs in the relationship between buyer and seller. Small purchasers are also at a disadvantage if they

have small orders, to avoid the surcharges they may order less often, which begins to impact their quality.

The big distributors have huge advantage using their economies of scale and often purchasing up smaller operations. This is also the case with farmers with one local example being that a farmer can have guaranteed sales through distributors at a lower price point. Therefore it comes down to whether they want to do all the legwork and assume risk to get a high price or sell to a distributor with guarantees for a lower price. The system then continues to feed on itself. There is also the matter of whether people first demanded any product at any time or if providers began supplying any product at any time. Either way people's expectations are out of line with natural systems and therefore companies who can source from around the world or state-of-the-art growing operations are at a huge advantage compared to local farmers. On top of that is the fact that farm policy often is geared for the big producer and fails to understand the dynamics of small farms and the operations they run. This also has a bit to do with safety because of food borne illness outbreaks, consumer advocates and the increased concern people now have about such issues.

UGA is working to source food more locally, regionally or from Georgia. this means not only produces, but also processors that operate throughout the state. They estimate that 15-20% of their produce comes from Georgia or bordering states and that they seek such production when the prices and available quantities work out. There is also a chapter of Real Food at UGA who works supply dining halls with not only regional produce, but also produce that is raised sustainably nourishing producers, consumers, communities and the Earth.

Becoming a vendor to a major distributor or store requires many steps, excerpted below is what Eric White told me about the process for Whole Foods.

Question:

In simple terms, what is the process for a farm to become a producer for your operation?

Answer:

Farm owner or representative needs to make contact with the stores and find out who the right person to talk to is. The correct contact person is different for different product teams. Let's use the grocery or dry goods team as an example. If an olive farmer wanted to sell his olive oil at our store, the farmer would want to start by speaking to the Grocery Team Leader at the store closest to his farm. The farmer would introduce the product and attempt to gain interest. If the Grocery Team Leader is interested, then a second meeting would be scheduled where the farmer would present samples of the product, samples of packaging that would be used, nutritional labels, suggested delivered cost, distribution plans and post launch support plans. If all of these items match up with what we are looking for, then the Grocery Team Leader would give the farmer a new vender application and a new vender information packet. This is not a guarantee that we will sell the product, it is just the next step. After the farmer submits the application, it is sent to the regional grocery team along with samples for their review. Typically, if everything checks out as

far as standards and proper packaging, the regional team will not say no to a product that a local grocery team leader wants. If all parties agree to continue, the next step is to complete a farm inspection to verify that the product is being grown as the farmer presented. After this, if all parties still agree, then we begin the process of entering the product into our accounting and ordering system and set a launch date. (this is an actual example from last week)

Appendix E: Georgia Food Hub Matrix: Operations and Projects

	aggregation	direct sales	sale to restaurants	wholesale	Active Management	CSA	where from	where to	comments
Existing									
Bowersville Family Produce	•		•	•	•		Northeast Georgia	Southeast	
Coastal Georgia Small Farmers Cooperative	•			•			Glenville, GA	Savannah & surrounding areas	
Moore Farms and Friends	•	•	•		•	•	AL, GA, TN & organics from further away	Atlanta & Birmingham	
Revival Foods	•	•	•	•	•		GA	Savannah, GA	
White Oak Pastures	•	•	•	•	•	•	Bluffton, GA	AL, DC, FL, GA, KY, MD, NJ, OH, PA, TN, VA, Online	
Turnip Truck	•		•	•	•		GA, SC	Atlanta, GA	
Potential									
Basic5							Atlanta Area	Atlanta, GA	In Planning Stages
ChattaCreek Meats							Carrollton, GA	Atlanta & other areas	Meat processor
Chattnooga Sustainable Farmers	•						AL, GA, TN	Chattanooga area	Expanding ; Needs wholesale component
Macon Food Hub Project							Bibb and surrounding counties	Macon, GA	In Planning Stages
Morgan County Food Hub Project							Morgan & Walton counties	Morgan & Walton counties	In Planning Stages; conducted feasibility study

	Agg.	D.S.	Sale to Res.	Wholesale	A.M.	CSA	From	To	Comments
Milan Food Hub Project							Dodge & Telfair counties	Dodge & Telfair counties	In Planning Stages
Roberta Food Hub Project							Crawford & surrounding counties	Crawford & surrounding counties	Poultry processing; In Planning Stages
Southwest Georgia Regional Food System							Dougherty & surrounding counties	Dougherty & surrounding counties	In Planning Stages; obtained USDA grant
The Veggie Patch		•		•			Commerce, GA	Commerce, GA	Plans to become a multi-farm aggregator
The Whole Community Food Network	•						GA, NC, SC	Tiger, GA	In Planning Stages
Non-Hub Operations									
Athens Locally Grown	•	•					GA, SC, AK	Athens, GA	No wholesale
Atlanta Locally Grown	•	•					GA, SC, AK	Atlanta, GA	No wholesale
Bluebird Market and CSA	•	•				•	GA	Atlanta, Griffin, Thomaston, Zebulon, GA	No wholesale
Carlton Farms	•	•				•	Rockmart, GA and other GA producers	Atlanta area	No wholesale

	Agg.	D.S.	Sale to Res.	Wholesale	A.M.	CSA	From	To	Comments
Conyers Locally Grown	•	•					GA, SC, AK	Conyers, GA	No wholesale
Dacula Buyers Club	•	•					FL, GA, AK	Dacula, GA	No wholesale
Dunwoody Green Market	•	•				•	GA	Dunwoody, Atlanta, GA	No wholesale
Farmers Fresh CSA	•	•				•	AL, GA	Carrollton, GA	No wholesale
Fulton Co. Cooperative Fresh Mobile Farmers Market	•	•						Fulton Co. GA	No wholesale
Global Growers Network	•	•				•	Atlanta Area	Atlanta, GA	No wholesale
Health Matters	•	•					All over	Hartwell, GA	A co-op store
J&S Produce							FL, GA, NC, OH	Southeast & Midwest US	Primary sales are not from Georgia Farms
Natures Garden Delivered	•					•	North and South America	Atlanta Area	No wholesale
Nlaws Produce	•		•	•			all over	Along GA & SC coast, Charleston to St. Simons	Primary sales are not from Georgia Farms
Savannah Food Co-op	•	•				•	CA, FL, GA, IA, NC, SC	Savannah, GA	No wholesale

Appendix F: Model Right to Farm Legislation^{lxiii}

STATE AGRICULTURE DEVELOPMENT COMMITTEE MODEL RIGHT TO FARM ORDINANCE

A. As used in this ordinance, the following words shall have the following meanings:

“Commercial farm” means:

1. A farm management unit of no less than five acres producing agricultural or horticultural products worth \$2,500 or more annually, and satisfying the eligibility criteria for differential property taxation pursuant to the Farmland Assessment Act of 1964, N.J.S.A. 54:4-23.1 et seq.; or

2. A farm management unit less than five acres, producing agricultural or horticultural products worth \$50,000 or more annually and otherwise satisfying the eligibility criteria for differential property taxation pursuant to the Farmland Assessment Act of 1964, N.J.S.A. 54:4-23.1 et seq.

“Farm management unit” means a parcel or parcels of land, whether contiguous or noncontiguous, together with agricultural or horticultural buildings, structures and facilities, producing agricultural or horticultural products, and operated as a single enterprise.

“Farm market” means a facility used for the wholesale or retail marketing of the agricultural output of a commercial farm, and products that contribute to farm income, except that if a farm market is used for retail marketing at least 51 percent of the annual gross sales of the retail farm market shall be generated from sales of agricultural output of the commercial farm, or at least 51 percent of the sales area shall be devoted to the sale of the agricultural output of the commercial farm, and except that if a retail farm market is located on land less than five acres in area, the land on which the farm market is located shall produce annually agricultural or horticultural products worth at least \$2,500.

“Pick-your-own operation” means a direct marketing alternative wherein retail or wholesale customers are invited onto a commercial farm in order to harvest agricultural, floricultural or horticultural products.

B. The right to farm is hereby recognized to exist in this [Township, Borough, City] and is hereby declared a permitted use in all zones of this [Township, Borough, City]. This right to farm includes, but not by way of limitation:

(1) Production of agricultural and horticultural crops, trees, apiary and forest products, livestock, poultry and other commodities as described in the Standard Industrial Classification for agriculture, forestry, fishing and trapping.

(2) Housing and employment of necessary farm laborers.

(3) Erection of essential agricultural buildings, including those dedicated to

the processing and packaging of the output of the commercial farm and ancillary to agricultural and horticultural production.

(4) The grazing of animals and use of range for fowl.

(5) Construction of fences.

(6) The operation and transportation of large, slow-moving equipment over roads within the [Township, Borough, City].

(7) Control of pests, including but not limited to insects and weeds, predators and diseases of plants and animals.

(8) Conduction of agriculture-related educational and farm-based recreational activities provided that the activities are related to marketing the agricultural or horticultural output of the commercial farm and permission of the farm owner and lessee is obtained.

(9) Use of any and all equipment, including but not limited to: irrigation pumps and equipment, aerial and ground seeding and spraying, tractors, harvest aides, and bird control devices.

(10) Processing and packaging of the agricultural output of the commercial farm.

(11) The operation of a farm market with attendant signage, including the construction of building and parking areas in conformance with [Township, Borough, City] standards.

(12) The operation of a pick-your-own operation with attendant signage.

(13) Replenishment of soil nutrients and improvement of soil tilth.

(14) Clearing of woodlands using open burning and other techniques, installation and maintenance of vegetative and terrain alterations and other physical facilities for water and soil conservation and surface water control in wetland areas.

(15) On-site disposal of organic agricultural wastes.

(16) The application of manure and chemical fertilizers, insecticides and herbicides.

(17) Installation of wells, ponds and other water resources for agricultural purposes such as irrigation, sanitation and marketing preparation.

(18) Engage in the generation of power or heat from biomass, solar, or wind

energy, provided that the energy generation is consistent with the provisions of P.L.2009, c.213 (C.4:1C-32.4 et al.), as applicable, and the rules and regulations adopted therefor and pursuant to section 3 of P.L.2009, c.213 (C.4:1C-9.2); and Commercial farm operators may engage in any other agricultural activity as determined by the State Agriculture Development Committee and adopted by rule or regulation pursuant to the provisions of the “Administrative Procedure Act,” P.L. 1968, c.410 (C.52:14B-1 et seq.).

C. Commercial farm operators are strongly advised to adhere to generally accepted agricultural management practices that have been:

- (a) promulgated as rules by the State Agriculture Development Committee;
- (b) recommended as site-specific agricultural management practices by the county agriculture development board;
- (c) approved by the local soil conservation district in the form of a farm conservation plan that is prepared in conformance with the United States Department of Agriculture, Natural Resources Conservation Service (NRCS) Field Office Technical Guide (FOTG), revised April 20, 1998, as amended and supplemented; or
- (d) recommended by the Rutgers Agricultural Experiment Station.

D. The foregoing activities must be in conformance with applicable Federal and State law.

E. The foregoing practices and activities may occur on holidays, weekdays and weekends by day or night and shall include the attendant or incidental noise, odors, dust and fumes associated with these practices.

F. It is hereby determined that whatever nuisance may be caused to others by these foregoing uses and activities is more than offset by the benefits of farming to the neighborhood community and society in general.

G. Any person aggrieved by the operation of a commercial farm shall file a complaint with the applicable county agriculture development board or the State Agriculture Development Committee in counties where no county board exists prior to filing an action in court.

H. To help parties resolve disputes involving the operation of commercial farms, the State Agriculture Development Committee also provides an Agricultural Mediation Program. Mediation is a voluntary process in which a trained, impartial mediator helps disputing parties examine their mutual issues, identify and consider options, and determine if they can agree on a solution. A mediator has no decision-making authority. Successful mediation is based on the voluntary cooperation and participation of all the parties.

I. An additional purpose of this ordinance is to promote a good neighbor policy by advising purchasers and users of property adjacent to or near commercial farms of accepted activities or practices associated with those neighboring farms. It is intended

that, through mandatory disclosures, purchasers and users will better understand the impacts of living near agricultural operations and be prepared to accept attendant conditions as the natural result of living in or near land actively devoted to commercial agriculture or in an Agricultural Development Area, meaning an area identified by a county agriculture development board pursuant to the provisions of N.J.S.A.4:1C-18 and certified by the State Agriculture Development Committee. The disclosure required by this section is set forth herein, and shall be made a part of, the following disclosure form:

REAL ESTATE TRANSFER DISCLOSURE STATEMENT

This disclosure statement concerns the real property situated in the [Township, Borough, City] of [] described as Block _____, Lot _____. This statement is a disclosure of the conditions of the above described property in compliance with Ordinance No. _____ of the [Township, Borough, City] of []. It is not a warranty of any kind by the seller(s) or any agent(s) representing any principal(s) in this transaction, and is not a substitute for any inspections or warranties the principal(s) may wish to obtain.

I.

Seller's Information

The seller discloses the following information with the knowledge that even though this is not a warranty, prospective buyers may rely on this information in deciding whether and on what terms to purchase the subject property. Seller hereby authorizes any agent(s) representing any principal(s) in this transaction to provide a copy of this statement to any person or entity in connection with any actual or anticipated sale of the property. The following are representations made by the seller(s) as required by the [Township, Borough, City] of [] and are not the representation of the agents, if any. This information is a disclosure and is not intended to be part of any contract between the buyer and seller. The [Township, Borough, City] of [] permits the operation of generally accepted agricultural management practices within the municipality. If the property you are purchasing is located near land actively devoted to commercial agriculture or in an Agricultural Development Area, meaning an area identified by a county agriculture development board pursuant to the provisions of N.J.S.A.4:1C-18 and certified by the State Agriculture Development Committee, you may be affected by these agricultural activities or practices. The effect of these activities or practices may include, but are not limited to: noise, odors, fumes, dust, smoke, insects, operation of machinery (including aircraft) during any 24 hour period, storage and disposal of manure and compost, and the application by spraying or otherwise of fertilizers, soil amendments, herbicides and pesticides. One or more of the effects described may occur as the result of any agricultural operation which is in conformance with existing Federal and State laws and regulations and accepted customs and standards. If you live near an agricultural area, you should strive to be sensitive to the needs of commercial farm operators, as their presence is a necessary aspect of an area with a strong rural character and a strong agricultural sector. The State Agriculture Development Committee has established a formal complaint process to assist in the resolution of any disputes which might arise between residents of the [Township, Borough, City] of [] regarding the operations of commercial farms.

Seller certifies that the information herein is true and correct to the best of seller's knowledge as of the date signed by the seller.

Seller _____ Date _____

Seller _____ Date _____

II.

Buyer(s) and seller(s) may wish to obtain professional advice and/or inspections of the property and to provide for appropriate provisions in a contract between buyer and seller(s) with respect to any advice/inspections/defects.

I/We acknowledge receipt of a copy of this statement.

Seller _____ Date _____ Buyer _____

Date _____

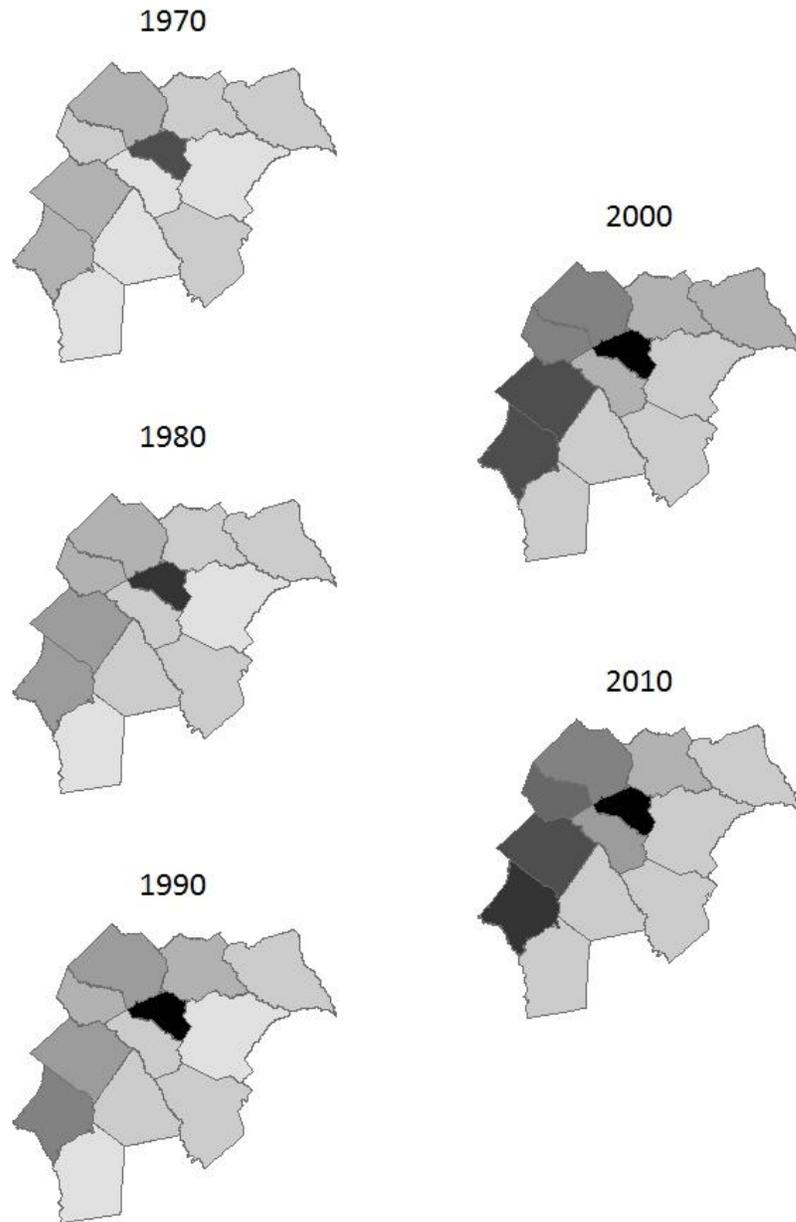
Seller _____ Date _____ Buyer _____

Date _____

Agent representing seller _____ By _____

Date _____

Appendix G: Regional Population Growth by Decade



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