2019

Central Alabama Food Hub Feasibility Assessment

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I. Introduction

A USDA Local Food Promotion Grant was obtained for the purpose of conducting a feasibility study and business plan for a food hub in Central Alabama. The grant was administered by the Central Alabama Regional Planning and Development Commission, Pamela Trammell, Project Administrator.

The timing of this study coincides with Americans showing an increased interest in having access to more locally grown foods. To be sure, entrepreneurs, the food service industry, health care groups, schools and everyday citizens are increasingly interested in purchasing more locally produced foods. Farmer's markets and community-supported agriculture (CSA) represent examples of how farmers have been responding to the demand for locally produced food in specific communities. In response to interest in a marketing mechanism capable of meeting the demand for locally grown food for an extended geographic area (i.e. a region), various groups are collaborating to promote the establishment of food hubs. When properly structured, food hubs can help bring about improvements in a region's food system leading to the availability of more locally produced foods.

PURPOSE OF THIS STUDY

The principal purpose of this study is to assess whether or not a food hub in Central Alabama can operate as a viable economic agricultural marketing entity while assisting local farmers to gain access to exported markets and while providing area consumers with improved access to locally sourced food (see map, p. 7). The focus of the study is on the economic feasibility of increasing the availability of locally grown food for wholesale buyers who sell and/or prepare food for selected publics. These wholesale buyers include resellers (food stores), nursing homes, hospitals, schools, and restaurants. Currently there are 20 farmer's markets and 18 CSAs in Central Alabama serving area consumers directly (i.e. retail sales). While some retail food stores may occasionally identify a produce item as "locally grown," their traditional and centralized buying practices typically favors them buying from out-of-market produce vendors. A survey of potential wholesale buyers was conducted as part of this study and is discussed in *Section IV*.

METHODOLOGY

Southeast Research performed the following tasks as part of this assessment:

- Site visits to existing farmer's markets in Central Alabama.
- Conducted numerous work meetings with project administrator at Central Alabama Planning and Development Commission, Ms. Pamela Trammell.
- Reviewed studies pertaining to area demographics including population, percent poverty, household and per capita income, incidence of food deserts (by county).
- Reviewed studies pertaining to regional agricultural statistics of the area including number of farms, total land in farms, average farm size, sales per farm, and market value crop sales.
- Conducted a survey with forty-six (46) local producers/farmers. Producers were interviewed by telephone from a list generate by Southeast Research and included members of the Alabama Fruit and Vegetable Growers Association, Alabama Cattleman Association, Alabama Pecan Growers Association, Farmer's Market Authority, Local Harvest, Pick Your Own, and other farmers. All surveys were completed in March and April 2019.
- Conducted a survey with twelve (12) stakeholders/partners. Stakeholders were interviewed by telephone from a list generate by Southeast Research and included non-profit agencies, food banks, extension services, food policy advocates, state agencies, and university agriculture representatives. All surveys were completed in March and April 2019.
- Conducted a survey with twenty-one (21) potential wholesale buyers. Buyers were interviewed by telephone from a list generated by Southeast Research and included independent and corporate grocers, independent and corporate

restaurants, and institutional food service providers, such as schools, hospitals, and nursing homes located in the Central Alabama area. All surveys were completed in March and April 2019.

- Conducted personal interviews with food banks and the director of Alabama's only food hub located in Huntsville, Alabama.
- Conducted individual conversations with several potential stakeholders.

LIMITATIONS

When reviewing the findings and recommendations of this report, the following limitations should be considered:

- Some of the secondary data used in this report is two to three years old and thus may understate or overstate some of the observations used in our analysis.
- Three surveys were conducted as part of the analysis for this report (producer survey, stakeholder/partner survey, and potential wholesale buyer survey). All surveys based on samples have the potential for sampling and non-sampling error. This can be an issue even when sound survey research procedures are adhered to.
- While Southeast Research relied on information and secondary data sources considered reliable, we assume no responsibility for accuracy of individual items.

In some instances, this material contains forecasts and forward-thinking information, including possible or assumed future performance, costs, sales levels or rates, valuations and industry growth and other trends. Actual results and developments may differ materially from those implied or expressed by statements herein and are dependent on a variety of factors.

ACKNOWLEDGEMENTS

Special thanks to:

All individuals who cooperated and completed phone interviews as part of the producer/ farmer survey, the stakeholder/partner survey, and the wholesale buyer survey

Carey Martin-Lane, Natalie Bishnoi, and Chyna Smith, The Farm Food Collaborative, Huntsville, Alabama for taking the time to complete an in-depth personal interview

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Richard Deem, Montgomery Area Food Bank, for taking the time to discuss his operation

Jayme Oates, Farmscape Solutions, for taking the time to discuss her aggregation operation in Alabama

II. Understanding the Local Food Market

In recent years we have witnessed growth in the number of several agricultural marketing institutions as stakeholders have been attempting to increase the income of small farmers and provide consumers with increased access to locally sourced foods. For example, the number of farmer's markets across the country has increased from 1,755 markets in 1994 to 8,761 markets in 2019 (Local Food

Figure 1: Local Food Market

	United States	Alabama	Central Alabama Market Area
Farmer's Markets[1]	8,761	139	20
CSAs[2]	7,176	75	18
Food Hubs[3]	235	1	0

1 (Local Food Directories: National Farmers Market Directory, n.d.)
2 (Local Harvest, n.d.)
3 (Local Food Directories: Food Hub Directory, n.d.)

Directories: National Farmers Market Directory, n.d.). Further, the number of CSA[1] operations in the U.S. has grown from 1,080 in 2005 (Adam, 2006) to 7,176 in 2019 (Local Harvest, n.d.). Today, Alabama is home to 139 farmer's markets, including 20 in the Central Alabama area (Local Food Directories: National Farmers Market Directory, n.d.). Alabama is also home to 75 CSAs, including 18 in Central Alabama (Local Harvest, n.d.). The number of food hubs has also experienced good growth in recent years. From April 2012 to 2019 the number of food hubs in the U.S. increased from 179 to 235 (Local Food Directories: Food Hub Directory, n.d.). This represents an increase of 31 percent over the seven year period or an average increase of 8 new food hubs per year over the span of seven years. While there are 235 food hubs in the United States, Alabama only has one which is located in North Alabama (Local Food Directories: Food Hub Directory, n.d.) (see *Figure 1*).

DESCRIPTION OF FOOD HUBS IN THE UNITED STATES

The USDA's working definition of a food hub is "a centrally located facility with a business management structure facilitating the aggregation, storage, processing, distribution, and/or marketing of locally/regionally produced food products" (Getting to Scale with Regional Food Hubs, n.d.).

Close to eight out of ten (79%) U.S. food hubs have a legal structure classification as either a non-profit (42%) or as a for-profit (37%). Close to one out of five (18%) food hubs are classified as cooperatives.

Legal Structures of Food Hubs in the United States	
Non-Profit	42%
For Profit	37%
Cooperative	18%
Other Legal Structures	3%

(Colasanti, et al., 2018, p. 12)

Distribution of the Business Models of Food Hubs in the United States	
Wholesale	28%
Direct to Consumer	39%
Hybrid (wholesale/direct to consumer)	33%

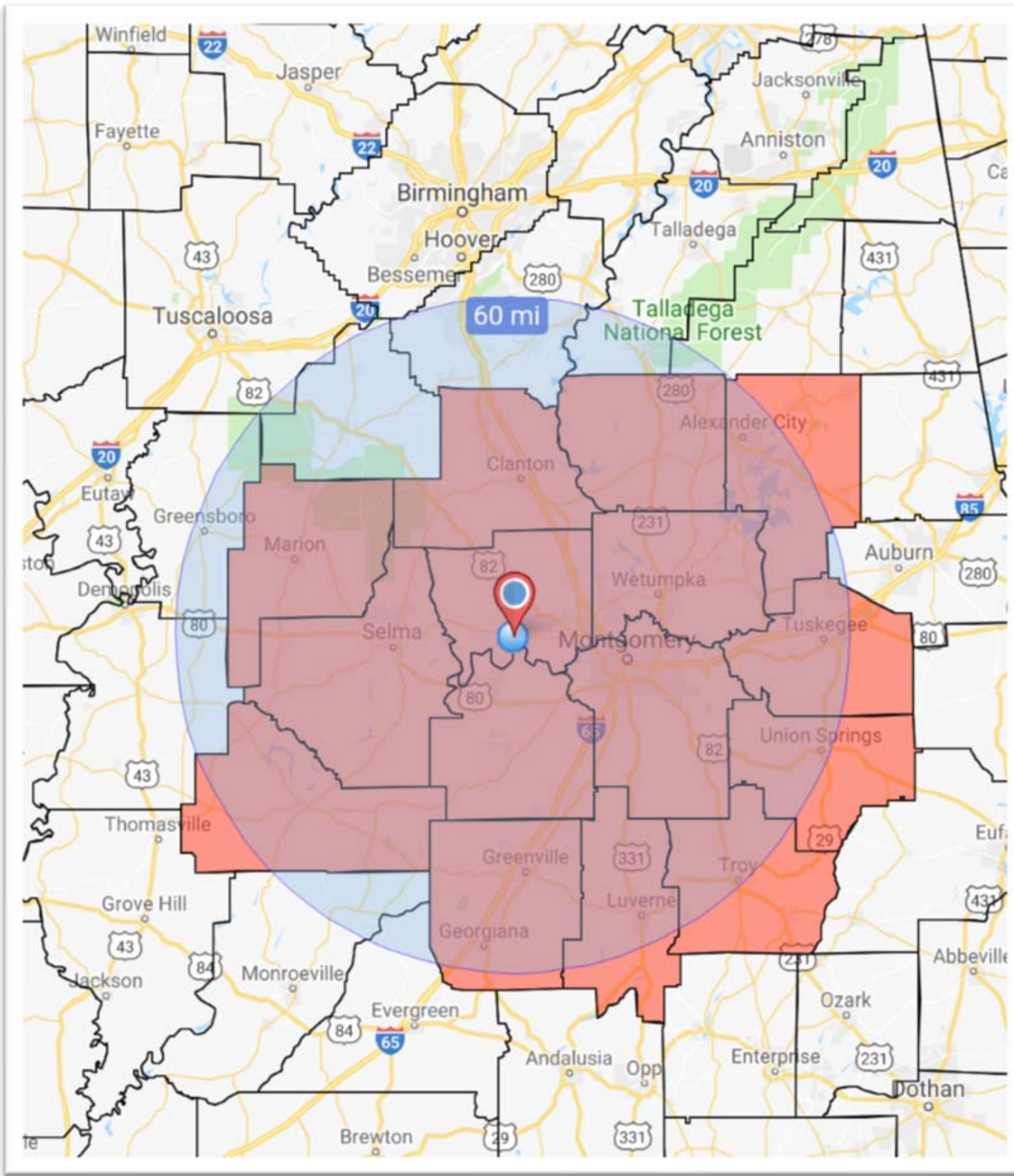
A food hub's business model indicates which type of customer groups they elect to serve. Twenty-eight percent of U.S. food hubs sell exclusively to wholesale type customers, which may include retailers, restaurants, hospitals, nursing homes, and schools. Close to four out of ten (39%) U.S. food hubs focus on selling locally grown produce principally to end users (i.e. direct-to-consumer) while about one-third (33%) are classified as hybrids, which means they sell to both wholesale customers and direct-to-consumers.

[1] CSA – Community Supported Agriculture – A food distribution arrangement between a farmer/producer and an individual consumer. The individual typically pays an upfront set amount to a farmer/producer. The farmer/producer delivers a box of harvested food per week during the summer and fall months.

PRIMARY MARKET AREA OF POTENTIAL FOOD HUB

The primary market area for a food hub potentially serving Central Alabama is defined as a fifteen (15) county area within a 60-mile radius of Autauga County, Alabama. These fifteen counties include: Autauga, Bullock, Butler, Coosa, Chilton, Crenshaw, Dallas, Elmore, Lowndes, Macon, Montgomery, Perry, Pike, Tallapoosa, and Wilcox (see *Figure 2*). Two other counties (Bibb and Shelby) are within the 60-mile radius but were excluded from the Central Alabama food hub market definition due to their close geographical proximity to Birmingham.

Figure 2: Proposed Primary Market Area for a Proposed Central Alabama Food Hub



SOURCE: Southeast Research, Inc.

POPULATION IN POVERTY

The Central Alabama food hub market area is principally rural and poverty levels in eleven of the fifteen counties are higher than the state as a whole. Additionally, median household incomes are lower than state income levels in twelve of the fifteen counties (see *Figure 3*) (American Community Survey 5-Year Estimates, 2017). While some important economic indicators for this region of the state are generally challenging, three of the counties located near the geographical center of the area represent a relatively attractive core market area. These counties are Autauga, Elmore, and Montgomery, which collectively represent close to sixty percent (58.4%) of the population in the Central Alabama food hub market area (American Fact Finder, 2018).

Figure 3: Regional Demographics and Poverty

Area	2018 Population (Estimate)[1]	Poverty (%)[2]	Child Poverty (%)[2]	Median Household Income[2]
Alabama	**4,887,871**	**18.0%**	**26.0%**	**$46,472**
Central Alabama Food Hub Market Area	**622,086**	**20.5%[3]**	**31.3%[3]**	**-**
Autauga	55,601	13.7%	20.0%	$55,317
Bullock	10,138	28.5%	50.2%	$29,655
Butler	19,680	24.4%	34.8%	$36,326
Chilton	44,153	19.4%	27.6%	$43,501
Coosa	10,715	14.4%	17.9%	$34,792
Crenshaw	13,824	17.6%	21.5%	$38,937
Dallas	38,310	31.9%	49.1%	$30,065
Elmore	81,887	13.5%	20.0%	$54,981
Lowndes	9,974	30.2%	48.1%	$29,785
Macon	18,439	25.9%	39.0%	$32,308
Montgomery	225,763	20.8%	31.9%	$46,545
Perry	9,140	41.9%	60.8%	$22,973
Pike	33,338	26.3%	34.1%	$35,684
Tallapoosa	40,497	21.2%	35.7%	$42,181
Wilcox	10,627	31.9%	41.7%	$27,012

1 (American Fact Finder, 2018)
2 (American Community Survey 5-Year Estimates, 2017)
3 Weighted average

FOOD CONSUMPTION AND EXPENDITURES

The Central Alabama food hub market area contains over 241,000 households who collectively spend over $1.6 billion on food (see *Figure 4*). Of this amount, 56% is spent on food eaten at home, while 44% is spent on food eaten away from home. The area's three largest counties (Autauga, Elmore, and Montgomery) are responsible for over sixty percent (61.2%) of all food expenditures in the market area. (Consumer Expenditure Survey, 2017)

Figure 4: Regional Food Expenditures

Area	Households[1]	Mean Household Income[1]	Per Capita Income[2]	Total Food Exp.[3]	At Home Food Exp.[3]	Away From Home Food Exp.[3]
Alabama	**1,856,695**	**$64,476**	**$25,746**	**$12.4B**	**$7.0B**	**$5.4B**
Central Alabama Food Hub Market Area	**241,176**	**$61,329**	**$23,777**	**$1.6B**	**$926.3M**	**$700.1M**
Autauga	21,054	$72,110	$27,824	$159.5M	$91.1M	$68.4M
Bullock	3,670	$42,317	$20,856	$22.8M	$12.9M	$9.9M
Butler	7,050	$47,812	$19,004	$43.8M	$24.9M	$18.9M
Chilton	16,768	$59,036	$23,368	$111.9M	$63.6M	$48.3M
Coosa	4,204	$48,059	$20,342	$26.1M	$14.8M	$11.3M
Crenshaw	5,358	$52,395	$21,580	$35.8M	$20.3M	$15.5M
Dallas	16,487	$44,023	$18,248	$102.5M	$58.2M	$44.3M
Elmore	29,115	$71,437	$26,251	$220.5M	$126.0M	$94.6M
Lowndes	4,309	$44,985	$18,976	$26.8M	$15.2M	$11.6M
Macon	7,852	$47,570	$19,564	$48.8M	$27.7M	$21.1M
Montgomery	89,776	$65,224	$26,712	$599.4M	$340.5M	$258.9M
Perry	3,039	$34,458	$13,449	$16.4M	$9.9M	$6.5M
Pike	12,284	$52,425	$20,808	$82.0M	$46.6M	$35.4M
Tallapoosa	16,369	$54,460	$22,430	$109.3M	$62.1M	$47.2M
Wilcox	3,841	$39,932	$15,774	$20.8M	$12.5M	$8.2M

1 (American Community Survey 5-Year Estimates, 2017)
2 (State and County Quick Facts, 2017)
3 Food expenditures by household in each of the 15 counties included as part of the Central Alabama Food Hub Market Area have been estimated from data included in the 2017 U.S. Department of Labor, Bureau of Labor Statistics Consumer Expenditure Survey, Southern Region by Income Before Taxes – Table 3123 (Consumer Expenditure Survey, 2017). The procedure for calculating the estimated household food expenditures by county was as follows: each county's mean household income was used to identify the income group for first estimating per household annual food expenditures. The annual per household food expenditures were then multiplied by the number of households for specific counties to estimate total food expenditures (including "at home" and "away from home" expenditures). In some instances, the individual categories may not add up to the total entity due to rounding.

Households in the fifteen counties representing the proposed trade area for the Central Alabama food hub spent an estimated $170 million on fruits and vegetables in 2017 (see *Figure 5*). This represents 10.5% of their total food expenditures. These same households spent almost $112 million ($111.6 million) on fresh fruits and vegetables. Stated differently, close to two-thirds (66%) of all expenditures on fruits and vegetables represent the proportion spent on fresh produce. On average, households in the fifteen county area spent an estimated $706 a year on fruits and vegetables. The amount households spent on fresh fruits and vegetables averaged an estimated $463 per year in 2017. (Consumer Expenditure Survey, 2017)

Figure 5: Regional Expenditures for Fruits and Vegetables

Area	Total Fruits and Vegetables ($1,000)	Fresh Fruits ($1,000)	Fresh Vegetables ($1,000)	Processed Fruits ($1,000)	Processed Vegetables ($1,000)
Central Alabama Food Hub Market Area	**170,256**	**59,802**	**51,824**	**24,430**	**34,200**
Autauga	16,496	5,707	5,107	2,391	3,291
Bullock	2,367	878	705	337	447
Butler	4,546	1,687	1,353	648	858
Chilton	11,793	4,104	3,585	1,689	2,415
Coosa	2,712	1,006	807	387	512
Crenshaw	3,768	1,311	1,146	540	771
Dallas	10,634	3,946	3,165	1,516	2,007
Elmore	22,811	7,892	7,062	3,306	4,551
Lowndes	2,778	1,031	827	396	524
Macon	5,064	1,879	1,507	722	956
Montgomery	63,142	21,973	19,195	9,042	12,932
Perry	1,763	607	547	252	357
Pike	8,640	3,007	2,626	1,237	1,770
Tallapoosa	11,513	4,006	3,500	1,649	2,358
Wilcox	2,229	768	692	318	451

Fruit and vegetable expenditures by household in each of the 15 counties included as part of the Central Alabama Food Hub Market Area have been estimated from data included in the 2017 U.S. Department of Labor, Bureau of Labor Statistics Consumer Expenditure Survey, Southern Region by Income Before Taxes – Table 3123 (Consumer Expenditure Survey, 2017). The procedure for calculating the estimated household fruit and vegetable expenditures by county was as follows: each county's mean household income was used to identify the appropriate income group for estimating per household annual expenditures for fruits and vegetables. The annual per household fruit and vegetable expenditures were then multiplied by the number of households for specific counties to estimate totals (including total fruits and vegetables, fresh fruit, fresh vegetables, processed fruit and processed vegetables). In some instances, the individual categories may not add up to the total entity due to rounding.

SOURCES OF FRESH FRUITS AND VEGETABLES

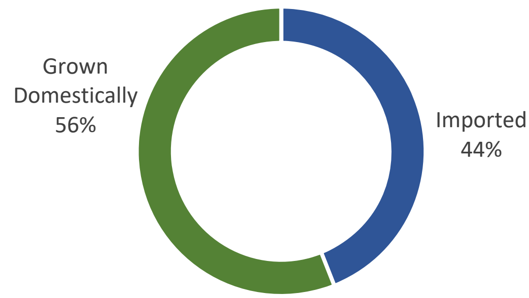
Increasingly, a large proportion of fresh produce consumed by U.S. households is not produced in this country. Sophia and Kuo Huang concluded that between 2003 and 2005 44% of fresh fruits and 16% of fresh vegetables consumed by U.S. households were imported (Huang & Huang, 2007).

The authors of this referenced study noted that strong growth in the volume and variety of fresh produce imports has allowed U.S. consumers to eat more fruits and vegetables and enjoy year-round access to fresh produce.

When estimating the sales potential for locally produced fresh fruits and vegetables among households in the fifteen county food hub market area, some consideration must be given to the impact of imported produce. First, much of the imported produce entering into U.S. markets is off season fruits and vegetables that cannot be grown locally year-round. While the total household expenditures for fresh fruits in Central Alabama is estimated to be $59.8 million, an estimated 44% of this is imported (see

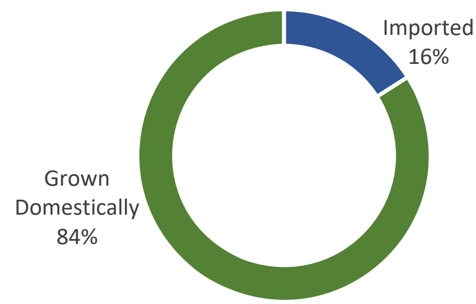
Figure 6). If we deduct the estimated imported proportion (44%), then the adjusted potential expenditures for domestically grown fresh fruits by households in Central Alabama is an estimated $33.5 million.

Figure 6: Source of Fresh Fruits Consumed by U.S. Households



While households in the proposed Central Alabama food hub market area spend an estimated $51.8 million on fresh vegetables, 16% of this volume is estimated to be imported (see *Figure 7*). When we deduct the estimated imported percentage (16%), the adjusted potential expenditures for domestically grown fresh vegetables by households in Central Alabama is an estimated $43.5 million.

Figure 7: Source of Fresh Vegetables Consumed by U.S. Households



Though imported fruits and vegetables have helped U.S. consumers enjoy year-round access to more fresh produce, these same consumers are increasingly developing an appetite for more locally produced food. According to Packaged Facts, locally produced foods represented an estimated $12 billion in sales in 2014 accounting for 2% of total U.S. sales of foods and beverages (Package Facts, 2015). This 2014 volume represents an increase of 140 percent over a six-year period. In discussing the growing demand for local foods, Hesterman and Horan state, “they (consumers) want to know where their food comes from, how it was made, and by whom. They want the transparency that is required to know its source” (Hesterman & Horan, 2017).

It is worthwhile to review the definition and/or meaning(s) that various groups use to define “local” produced food. Consumers likely use the term to mean food produced by farmers nearby and likely assume there are some environmental, health, and/or social benefits associated with “buying local.” According to the U.S. Congress, a locally or regionally produced agricultural product is one:

- ✓ which is produced and distributed in the locality or region where the finished product is marketed
- ✓ which has been shipped a total distance of 400 or fewer miles as determined by the secretary, and

- ✓ about which the distributor has conveyed to the end use consumers information regarding the origin of the product or production practices, or other valuable information (U.S. Congress, 2007).

Certainly, a food hub's strategic justification for existing is the fact that they represent a source for locally produced fruits, vegetables, and other food products.

FOOD DESERTS

As shown in *Figure 8*, an estimated one-fourth (25.5%) of the population residing in the Central Alabama food hub market area live in a food desert. Food deserts are defined as low-income areas with low access to fresh produce. While this study is assessing the market feasibility for a food hub serving wholesale customers, individual local farmers and all other area residents stand to benefit when more local produce enters the food system. Usage of more locally produced food means that schools, restaurants, retirement homes, and grocery stores will potentially be serving/selling more locally produced, fresh fruits and vegetables. A total of fifty-one food deserts were located in Central Alabama's food hub market area in 2015. These data underscore the need to make more locally sourced produce available to residents in the fifteen county area. (Food Access Research Atlas, 2015)

Figure 8: Regional Population and Food Deserts

Area	2018 Population (Estimate)[1]	2015 Number of Food Deserts[2]	2018 Estimated Population Living in a Food Desert[2]	2015 Percent of Population Living in a Food Desert[2]
Alabama	**4,887,871**	**246**	**1,182,865**	**24.2%**
Central Alabama Food Hub Market Area	**622,086**	**51**	**158,632**	**25.5%**
Autauga	55,601	2	18,460	33.2%
Bullock	10,138	2	5,667	55.9%
Butler	19,680	3	2,322	11.8%
Chilton	44,153	1	4,769	10.8%
Coosa	10,715	0	2,625	24.5%
Crenshaw	13,824	1	5,253	38.0%
Dallas	38,310	4	5,440	14.2%
Elmore	81,887	1	10,645	13.0%
Lowndes	9,974	1	2,244	22.5%
Macon	18,439	6	7,376	40.0%
Montgomery	225,763	23	76,985	34.1%
Perry	9,140	1	759	8.3%
Pike	33,338	2	7,834	23.5%
Tallapoosa	40,497	1	1,458	3.6%
Wilcox	10,627	3	4,548	42.8%

1 (American Fact Finder, 2018)
2 (Food Access Research Atlas, 2015)
Please note that the data pertaining to the number of food deserts and the percent of the area's population living in a food desert are for 2015 while the population estimates and the data pertaining to the estimated population living in a food desert are estimated for 2018.

REGIONAL AGRICULTURAL DESCRIPTION

In 2017 the fifteen counties included in the Central Alabama food hub market area produced agricultural products valued at approximately $820 million. This volume represents 14% of the market value of all Alabama agricultural products produced in 2017. Livestock sales in the fifteen county area accounted for 82% of the market value of all agricultural products sold in 2017, while the market value of crops represented 18% of the value of agricultural products produced that year. (National Agricultural Statistics Service, 2017)

The Central Alabama market area boasts a relatively large average farm size (316 acres) when compared to the state average (211 acres). While the total number of farms in the Central Alabama region accounts for 16% of all farms in Alabama, the actual land acreage of farms accounts for almost one-fourth (24%) of all farm acreage in Alabama. Eleven of the fifteen counties have average sales per farm of over $50,000 (See *Figure 9* for more details regarding general agricultural statistics describing the Central Alabama market area.). (National Agricultural Statistics Service, 2017)

Figure 9: Regional Agricultural Data

Area	Land in Farms (acres)	Number of Farms	Average Farm Size (acres)	Total Market Value of Agricultural Products ($1,000)	Average Sales per Farm	Market Value Crop Sales ($1,000)	Market Value Livestock Sales ($1,000)
Alabama	**8,580,940**	**40,592**	**211**	**$5,980,595**	**$147,334**	**$1,212,329 (20%)**	**$4,768,266 (80%)**
Central Alabama Food Hub Market Area	**2,022,486**	**6,401**	**316**	**$819,552**	**$128,035**	**$142,374[2] (18%)**	**$632,720[3] (82%)**
Autauga	113,236	371	305	$21,460	$57,844	$12,535	$8,925
Bullock	115,302	255	452	$44,459	$174,350	(D)[1]	(D)[1]
Butler	84,382	420	201	$132,029	$314,355	$4,619	$127,410
Chilton	76,318	463	165	$14,490	$31,297	$6,700	$7,791
Coosa	45,921	215	214	$1,707	$7,941	$300	$1,407
Crenshaw	114,337	543	211	$164,850	$303,592	$3,735	$161,115
Dallas	263,114	528	498	$64,000	$121,212	$27,886	$36,114
Elmore	93,703	538	174	$27,594	$51,290	$17,382	$10,212
Lowndes	202,907	512	396	$80,855	$157,920	$12,721	$68,134
Macon	120,208	373	322	$19,568	$52,461	$16,470	$3,097
Montgomery	233,046	575	405	$46,860	$81,496	$14,435	$32,425
Perry	163,224	349	468	$37,181	$106,536	$11,125	$26,056
Pike	165,682	594	279	$138,830	$233,721	$10,027	$128,804
Tallapoosa	65,828	347	190	$16,531	$47,639	$1,999	$14,532
Wilcox	165,278	318	520	$9,138	$28,735	$2,440	$6,698

(National Agricultural Statistics Service, 2017)

1 These data for Bullock County were suppressed by the USDA in an effort to protect confidentiality.

2 Market Value of Crop Sales for the Central Alabama Food Hub Market Area – Since the data for Bullock County are suppressed, we can only say that the total is at least $142.4 million.

3 Market Value of Livestock Sales for the Central Alabama Food Hub Market Area – Since the data for Bullock County are suppressed, we can only say that the total is at least $632.7 million.

NOTE: The total value of livestock sales will not total to the total market value of all agricultural products for the Central Alabama market area due to missing data for Bullock County.

As show in *Figure 10*, Alabama farmers sold farm products directly to consumers in 2017 with a market value of at least $9.4 million. At the same time, the market value farmers in the Central Alabama food hub market area sold directly to consumers was at least $1.5 million. This volume in the food hub market area was sold by 267 local farmers. (National Agricultural Statistics Service, 2017)

Figure 10: Market Value of Farm Products Sold Directly to Consumers - 2017

Area	Market Value of Farm Products Sold Directly to Consumers	Number of Farms Selling Directly to Consumers
Alabama	**$9,384,000[1]**	**1813**
Central Alabama Food Hub Market Area	**1,494,000[1]**	**267**
Autauga	$161,000	16
Bullock	(D)[1]	2
Butler	$30,000	20
Chilton	$749,000	32
Coosa	$12,000	11
Crenshaw	$13,000	14
Dallas	$98,000	25
Elmore	$100,000	37
Lowndes	$26,000	13
Macon	$129,000	24
Montgomery	$49,000	23
Perry	$20,000	12
Pike	$34,000	14
Tallapoosa	$68,000	20
Wilcox	$5,000	4

(National Agricultural Statistics Service, 2017)
1 The value of farm products for Bullock County was suppressed by the USDA in an effort to protect confidentiality. Statements that can be made about data in the above table pertaining to 2017 include: a) 1,813 Alabama farms sold farm products directly to consumers with a market value of at least $9,4 million; b) 267 farms located in the Central Alabama food hub market area sold farm products directly to consumers with a market value of at least $1.5 million.

In 2017, 1,500 Alabama farmers sold vegetables, including melons, potatoes, and sweet potatoes with a market value of $59.2 million. Also in 2017, 1,440 Alabama farmers sold fruit, tree nuts, and berries with a market value of at least $18.4 million. The market value of vegetables, including melons, potatoes, and sweet potatoes sold by farmers in the combined fifteen counties of the Central Alabama market area totaled $7.8 million, while the market value of fruits, tree nuts, and berries farmers sold in these same fifteen counties was at least $5 million (see *Figure 11*). (National Agricultural Statistics Service, 2017)

Figure 11: Market Value of Selected Agricultural Products Sold in 2017

	Vegetables, Melons, Potatoes and Sweet Potatoes		Fruits, Tree Nuts and Berries	
Area	Number of Farms	Sales	Number of Farms	Sales
Alabama	**1500**	**$59,234,000**	**1440**	**$18,441,000**
Central Alabama Food Hub Market Area	**376**	**$7,806,000**	**257**[1]	**$4,979,000**[1]
Autauga	31	$2,523,000	17	(D)[1]
Bullock	9	$185,000	15	$396,000
Butler	23	$223,000	22	$342,000
Chilton	43	$1,385,000	33	$2,628,000
Coosa	4	$10,000	14	$51,000
Crenshaw	12	$148,000	24	$188,000
Dallas	47	$1,148,000	14	$204,000
Elmore	31	$379,000	32	$167,000
Lowndes	6	$131,000	8	$62,000
Macon	22	$404,000	12	$229,000
Montgomery	11	$68,000	6	$54,000
Perry	13	$154,000	(D)[1]	(D)[1]
Pike	11	$721,000	35	$410,000
Tallapoosa	13	$83,000	22	$248,000
Wilcox	22	$244,000	3	(D)[1]

(National Agricultural Statistics Service, 2017)

1 The value of farm products for some counties were suppressed by the USDA in an effort to protect confidentiality so the total value of some farm products sold in the Central Alabama food hub market area is incomplete. Statements that can be made about data in the above table pertaining to 2017: a) 1,500 Alabama farms sold vegetables, melons, potatoes, and sweet potatoes with a market value of $59.2 million; b) 1,440 Alabama farms sold fruits, tree nuts, and berries with a market value of at least $18.4 million; c) 376 farms located in the Central Alabama food hub market area sold vegetables, melons, potatoes, and sweet potatoes with a market value of $7.8 million; d) at least 257 farms located in the Central Alabama food hub market area sold fruits, tree nuts, and berries with a market value of at least $5 million.

SUMMARY

Nationwide, the number of farmer's markets, CSAs, and food hubs have experienced good growth in recent years. The state of Alabama has what appears to be good geographical coverage of both farmer's markets (average of 2.2 per county) and CSAs (average of 1.2 per county). Nevertheless, the state has 246 identified food deserts while the Central Alabama market area has 51. The state has only one food hub (The Farm Food Collaborative) located in North Alabama. While farmer's markets and CSAs sell fresh locally grown produce principally to end use consumers, food hubs, depending on the individual business model, may sell to either end use consumers, to wholesale type buyers, or to both. Nationwide, 28% of all food hubs sell only to wholesale buyers, 39% sell principally to the end use consumer, and 33% are hybrids meaning they sell to both end use consumers and to wholesale buyers.

The market area for a potential food hub in Central Alabama has been defined to include the fifteen counties located within a 60-mile radius of Autauga County, located near the geographical center of Central Alabama. With the exception of the urbanized portion of Montgomery County, the proposed market area for a food hub in Central Alabama is principally a rural area. One in five of the market area's 622,000 residents are living at or below the poverty level, while one in three (31.3%) children in the area live in poverty. The average household income for the area in 2017 was $61,300 which is $3,000 less than the state's average household income.

In 2017, households in the Central Alabama market area spent approximately $1.6 billion on food. Of this amount, an estimated $170 million was spent on fruits and vegetables, of which close to two-thirds, or $112 million was spent on fresh fruits and vegetables. Estimates show that 44% of the fruit consumed by U.S. households and 16% of the vegetables consumed by U.S. households are imported from other countries.

The state of Alabama, including the Central Alabama food hub market area, contains numerous identified food deserts, which certainly builds a case for making more fresh produce available for local residents. The current study focuses on a food hub serving the needs of wholesale buyers. However, getting more locally grown produce into schools, hospitals, grocery stores, convenience stores, and nursing homes has the potential to help increase fruit and vegetable consumption among all residents.

In 2017, the 6,400 farms in the Central Alabama market area raised and produced agricultural products with a total market value of approximately $819.6 million. Approximately 18% of the market value of all agricultural products produced in the area were crops, versus livestock sales which represented about 82% of the total farm output. The total market value of crop sales reported for the fifteen county market area of $142.4 million is somewhat understated since one of the smaller county's crop sales were not reported. However, using total market proportions, we estimate the missing data to be $8.0 million. This would bring the total estimated market value of crop products in the targeted area to $150.8 million. From these numbers, we estimate that the market value of fruit and vegetable crops as a percent of total crops in the area is about 8.5%.

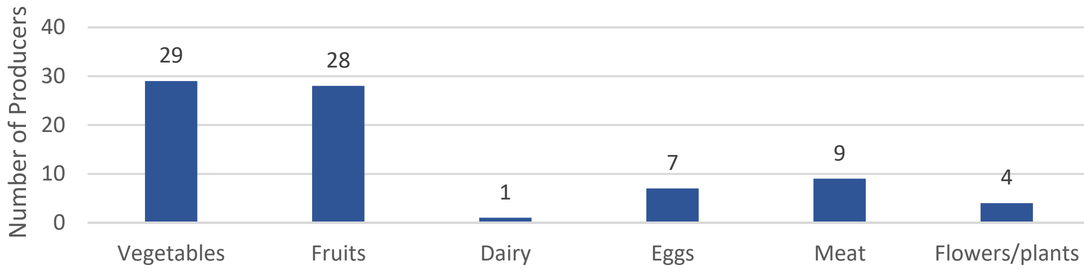
Direct sales of farm products to consumers in the market area in 2017 were approximately $1.5 million. With the total market value of fruits and vegetables sold by farmers in the area equaling $12.8 million, we estimate that direct sales of fruits and vegetables by farmers to consumers is about 12% of total production of fresh produce. In 2017, households in the defined fifteen county market area spent an estimated $112 million on fresh fruits and vegetables. However, farmers in the region produced fruits and vegetables that year with a market value of just $12.8 million. This means that local consumers are purchasing 89% of their fresh fruits and vegetables that were produced outside the region.

III. Survey of Local Farmers

Surveys with forty-six (46) Alabama farmers were conducted by telephone. For a copy of the survey instrument used and a complete list of those participating in the survey, see *Appendix A*.

Among the forty-six local farmers surveyed, twenty-nine (63%) currently grow and sell vegetables directly to buyers while 28 farmers (61%) grow and sell fruits directly to buyers. Some of the farmers are selling both vegetables and fruits directly to buyers, while a much smaller number of farmers are producing meat (n=9) and eggs (n=7) and selling these directly to buyers (see *Figure 12*).

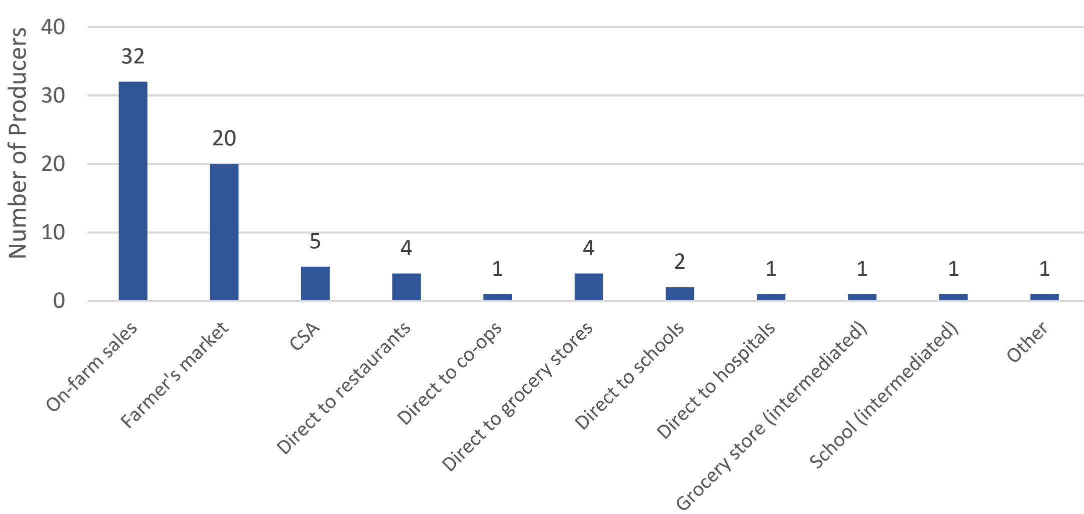
Figure 12: Crops Grown/Produced by Local Area Farmers and Sold Directly to Buyers



Only two of the forty-six farmers surveyed were not growing farm products and selling them directly to buyers at the time of this survey. However, when asked if they were interested in diversifying their farms by growing and selling fresh farm products, both indicated they were interested.

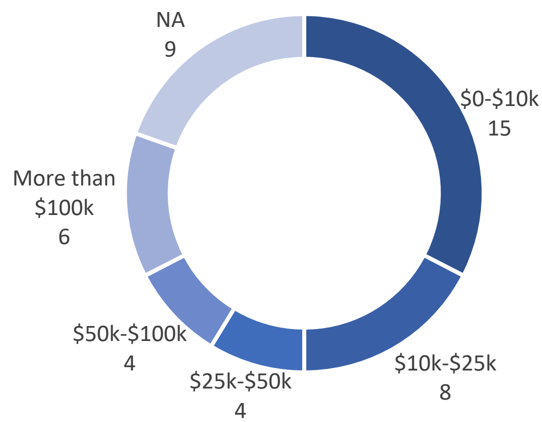
As shown in *Figure 13* below, the forty-six farmers surveyed are using an average of 1.6 distribution channels to reach the buyers of their farm production. However, seven out of ten (n=32) are reaching buyers through direct on-farm sales, while about four out of ten (n=20) are using farmer's markets to sell direct to buyers. These data suggest that local area farmers are likely selling their outputs principally to the general public (i.e. to end user customers). Five local area farmers are distributing their produce through CSA arrangements with buyers. A smaller number of local farmers are selling their produce directly to restaurants, grocery stores, schools, and hospitals.

Figure 13: Distribution Channels Used by Local Area Farmers to Reach their Buyers



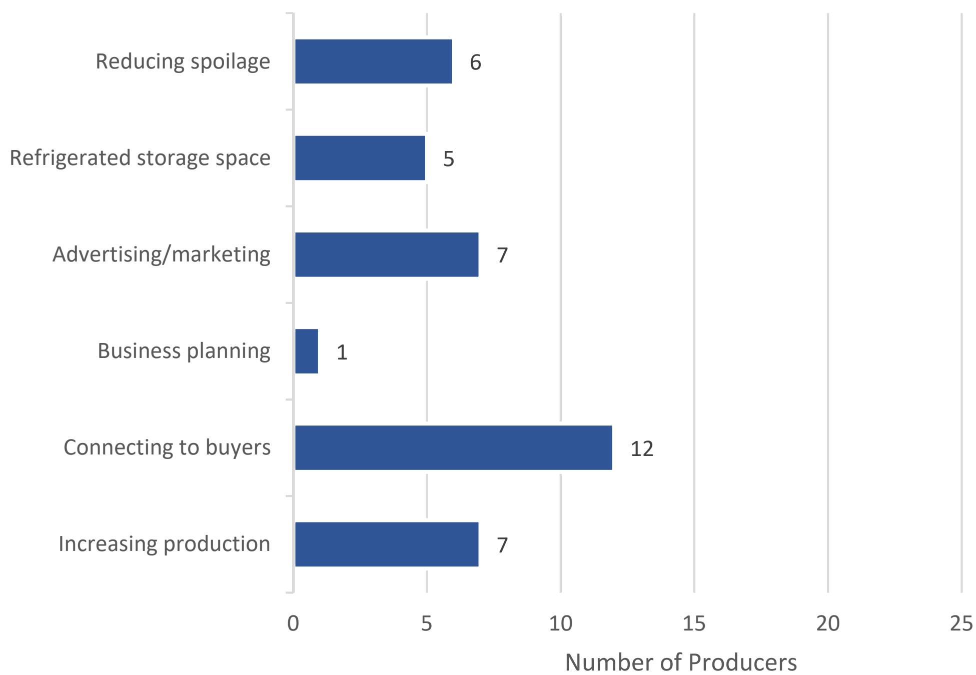
Among the local area farmers who revealed their income (2018) from local sales, a good majority (62%) stated that their income was less than $25,000 per year. An additional 21% (n=8) revealed their income from local sales was between $25,000 and $100,000 while 16% (n=6) reported their income from local sales to be more than $100,000 (see *Figure 14*).

Figure 14: Reported Income of Local Area Farmers Surveyed who Grow and Sell Fresh Items to Buyers (2018)



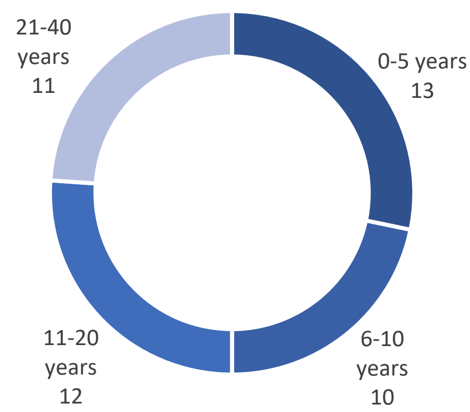
As shown in *Figure 15* below, local area produce farmers feel their greatest difficulty in expanding sales and profits is "connecting to buyers" (n=12), followed by "increasing production" (n=7), "advertising/marketing" (n=7), "reducing spoilage" (n=6), and "refrigerated storage space" (n=5).

Figure 15: Reported Difficulties of Local Area Farmers in Expanding Sales and Profits of their Fresh Farm Products



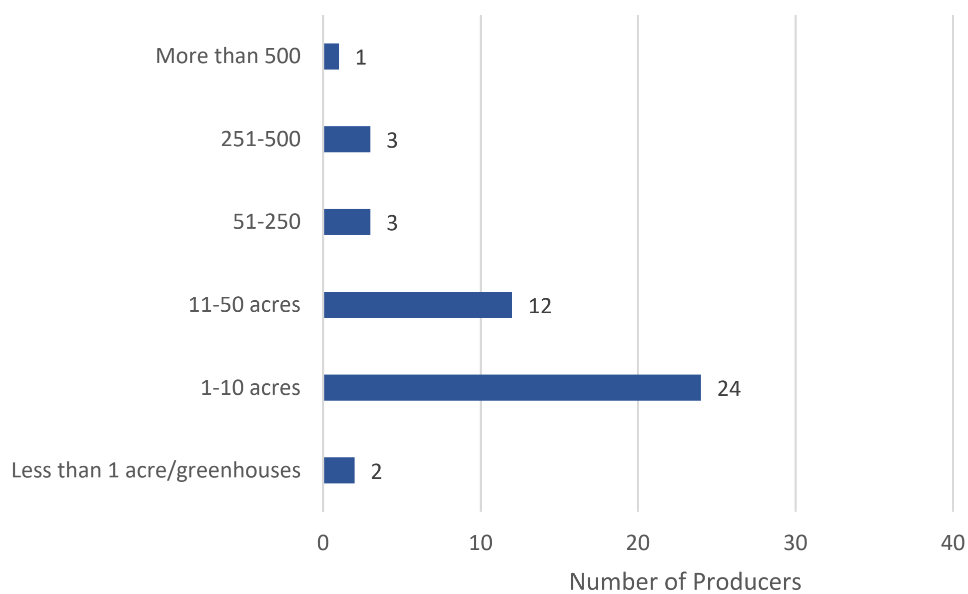
Twenty-three (50%) of the local farmers surveyed have been growing and selling fresh farm products for more than ten years and eleven farmers (24%) indicated they have been growing and selling fresh produce for more than 20 years (see *Figure 16*).

Figure 16: Number of Years Local Area Farmers Have Been Growing and Selling Fresh Farm Products



Thirty-six (78%) of the forty-six farmers surveyed reported that the size of their farms available to grow fresh produce was 50 acres or smaller (see *Figure 17*). The most frequently mentioned farm size available to grow produce (by 24 of the 46 farmers) was between 1 and 10 acres. The farmers were asked to indicate the number of acres they could devote to growing food to sell at a local food hub, assuming they could get a fair price for their produce. They were further asked to provide a low-end estimate and a high-end estimate. The average low-end estimate was 29 acres while the average high-end estimate was 32 acres. These data suggest there is a moderate amount of elasticity in the farmers' ability to expand production.

Figure 17: Size of Local Area Farms Available for Growing Fresh Farm Products



As shown in *Figure 18*, slightly more than one-half (54%) of the forty-six farmers surveyed indicted they were familiar with food hubs and with how they can be used to help sell their produce to local buyers. At the same time however, 46% of the local area fruit and vegetable farmers stated they are not familiar with food hubs. In other grower surveys reviewed by this consultant, the surveyors did not have to ask whether or not farmers were familiar with food hubs. Presumably, this is because in other regions of the country, food hubs are well known by produce growers. It is very telling that close to one-half of the local fruit and vegetable farmers surveyed are not familiar with food hubs, which indicates the need for a PR/marketing communications campaign to educate them.

Figure 18: Proportion of Local Area Produce Farmers who are Familiar with Food Hubs

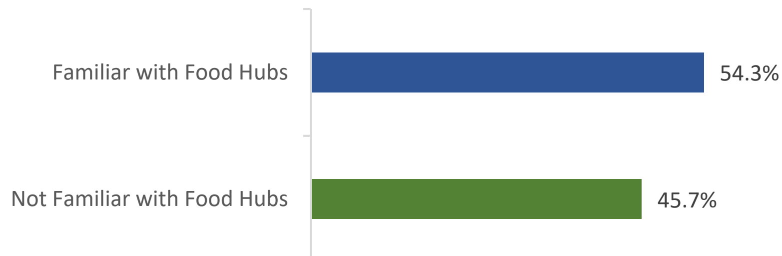
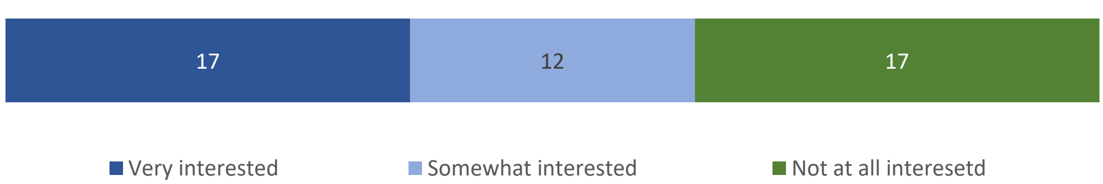


Figure 19 reveals that close to four out of ten (n=17) of the local farmers surveyed stated they were very interested in selling their fresh farm products through a local food hub. However, an equal number of the farmers surveyed stated they were not at all interested in selling their produce through a food hub. The remaining 12 responding farmers (26%) stated they were somewhat interested in selling through a local food hub. In using the above data to help estimate the number of farmers likely to use a local food hub in Central Alabama, a conservative approach is to consider only those farmers (37%) who stated they were very interested in using the facility.

Figure 19: "If a local food hub was reasonably accessible to your farm and offered a fair price, how would you describe your level of interest in selling fresh farm products through a local food hub?"



ATTITUDES AND OPINIONS TOWARDS FOOD HUBS AND SELECTED FOOD HUB SERVICES AMONG GROWERS WHO ARE INTERESTED IN SELLING THROUGH A FOOD HUB (N=29)

		%	N =
A.	**Type of markets farmers would like to sell more fresh produce to:**		
	Individual consumers by: on-farm sales, CSAs, and farmer's markets	79%	23
	Wholesale markets including businesses and institutions	90%	26
B.	**Level of interest of local farmers using selected services of a food hub such as processing to help with value-added activities:**		
	Very interested	55%	16
	Somewhat interested	31%	9
C.	**If farmers received help with processing, distribution, or marketing, could they expand production?**		
	Yes	66%	19
D.	**Among farmers who are interested in selling through a food hub, what proportion is interested in the following services:**		
	Using a commercial kitchen	28%	8
	Receiving education in key business skills	31%	9
	Learning more about food preservation, cooking, and nutrition	31%	9
	Connecting to new local buyers	72%	21
E.	**What would make the local area growers more likely to participate in selling produce through a food hub?**		
	If hub had facilities to process or add value to produce	52%	15
	If hub were able to pick up produce from farm	38%	11
	If hub were grower-owned	31%	9
	If farmer could become investor or part owner of food hub	28%	8
	If hub were a grower-owned cooperative	28%	8
	If hub were owned by local residents/businesses	21%	6
F.	**Would local area farmers be willing to participate in preseason crop planning with a local food hub and other groups?**		
	Yes	76%	22
G.	**Are local farmers familiar with some ways to extend the growing season for their farm Products?**		
	Yes	69%	20

		%	N =
H.	**Among farmers who are interested in selling through a food hub and are familiar with ways to expand the growing season (n=20):**		
	What proportion has had some produce grown using season extension structures?	65%	13
	If demand were identified, would farmers invest in season extension?	80%	16

SUMMARY

As part of this assessment study, a telephone survey was conducted with forty-six local area farmers. Twenty-nine (63%) of those surveyed currently grow and sell vegetables to buyers while twenty-eight farmers (61%) grow and sell fruits to buyers. Some farmers grow and sell both vegetables and fruits. The dominate distribution channels used by local farmers who grow and sell fruits and vegetables are on-farm sales, farmer's markets, and CSAs. A few direct sales to wholesale type customers were mentioned by the farmers and included restaurants (n=4), grocery stores (n=4), and schools (n=2). A majority (62%) of the farmers reported that their income from farming in 2018 was less than $25,000. Farmers noted that their greatest difficulties in expanding sales and profits was connecting to buyers (n=12), followed by increasing production (n=7), advertising and marketing (n=7), and reducing spoilage (n=6). One-half of the farmers surveyed reported they have been growing and selling local produce for more than ten years while thirteen farmers have been in the produce business for less than six years.

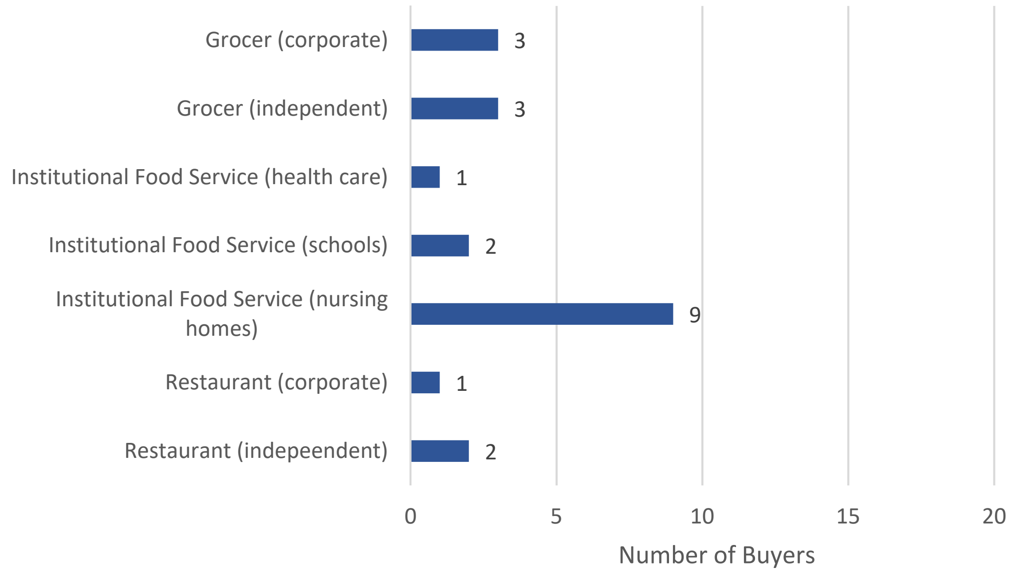
Close to eight out of ten (78%) of the farmers surveyed are using 50 acres or less to grow their produce. One objective of this study was to estimate the potential increase in acreage expansion by the farmers if a food hub opened in the market area and offered them a "fair price" for their produce. Farmers provided a low-end acreage estimate and a high-end estimate. The average low-end estimate was 29 acres while the average high-end estimate was 32 acres. One interpretation of these data is that there may be a moderate amount of elasticity in the farmers' motivation or interest to expand the amount of acreage they will devote to growing and selling fruits and vegetables.

Farmers who expressed some level of interest in selling their produce through a food hub want to expand their sales to consumers and to wholesale buyers. They also expressed strong interest in using selected services offered by a food hub. Further, close to two-thirds of those interested in selling produce through a food hub stated they could expand production if they had help from a food hub with processing, marketing, etc. The services farmers were most interested in receiving from a food hub included getting connected to new local buyers, receiving education in key business skills, and in food processing. Those who expressed interest in selling through a food hub stated they would be more likely to sell through a food hub if the growers could have some ownership in the facility and if the food hub could pick up produce from their farm. Others would have more interest in selling through a food hub if the hub had facilities to process and/or to add value to their produce. Most of those interested in selling through a food hub said they would be willing to participate in preseason crop planning with a food hub. A good majority (69%) of those farmers interested in selling through a food hub stated they were familiar with some ways to extend the growing season for farm products, and a big majority stated they would invest in season extension if product demand were identified.

IV. Survey of Potential Food Hub Buyers

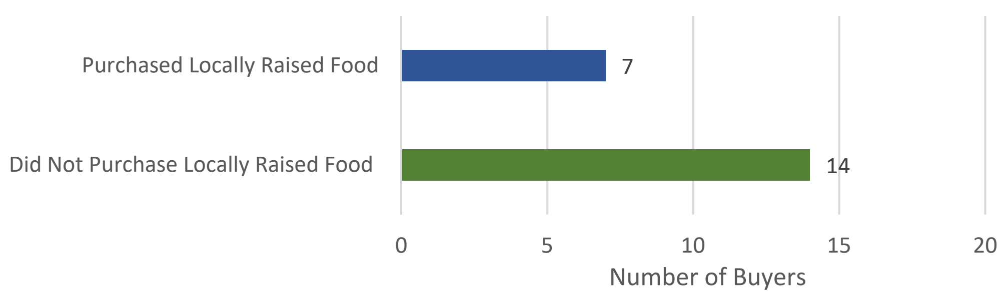
Surveys were completed with twenty-one (21) wholesale buyers who do business in the defined fifteen county market area. The completed surveys represent a cross-section of wholesale food buyers and include grocery stores, restaurants, and various institutional food service buyers representing schools, hospitals, and nursing homes (see *Figure 20*). To review a copy of the survey instrument and a list of wholesale food buyers surveyed, see *Appendix B*.

Figure 20: Types of Wholesale Food Buyers Surveyed



As shown in *Figure 21*, seven of the twenty-one wholesale food buyers reported they currently purchase some locally raised or produced food. When asked to provide an estimate of their organization's total locally produced food purchases for 2018, eleven of the twenty-one wholesale food buyers stated they were not allowed to disclose these data. Among those organizations who did disclose their 2018 locally sourced food budgets, the amounts varied from $58,000 to $1.5 million.

Figure 21: Incidence of Wholesale Food Buyers Currently Purchasing any Locally Raised or Produced Food



The seven survey participants who indicated they are currently buying locally sourced food were asked to provide an approximate percentage of their total food purchases that were locally grown last year. These proportions ranged from 1 percent to 50 percent. However, there are not enough cases to present a meaningful distribution, compute means, etc.

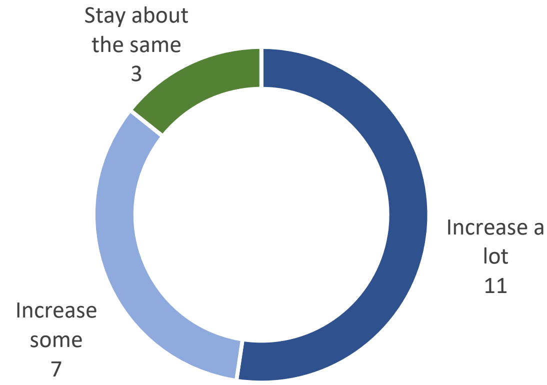
MOST OF THE WHOLESALE FOOD BUYERS SURVEYED WOULD LIKE TO SEE THEIR PURCHASES OF LOCALLY PRODUCED FOODS INCREASE IN THE FUTURE

All of the twenty-one wholesale food buyers were asked the following question:

> **"Looking forward over the next year or so, would you like to see your purchases of locally grown foods to increase a lot, increase some, stay the same, or decline?"**

As shown in *Figure 22*, eighteen of the twenty-one food buyers indicated they would like to see their purchases of locally grown foods increase over the next year or so. While these data do not indicate what the twenty-one wholesale buyers will do in terms of actually purchasing more locally sourced foods, the fact that most stated they would like to move in that direction is a positive sign.

Figure 22: What would wholesale buyers like to see happen to their purchases of locally grown food over the next year?



PERCEIVED BARRIERS PREVENTING WHOLESALE FOOD BUYERS FROM BUYING MORE LOCALLY GROWN FOOD FROM CENTRAL ALABAMA FARMERS

When buyers were asked what barriers prevented their organization from purchasing more locally grown food, nine of the twenty-one respondents mentioned the lack of availability of local produce. Corporate guidelines or being required to purchase from a pre-approved list of vendors was mentioned by six of the buyers. Other barriers mentioned included government regulations, no delivery service available for locally produced food, and needing to purchase products for a good price/good value. For a listing of all perceived barriers preventing wholesale food buyers from purchasing more locally sourced produce, see *Figure 23*.

Figure 23: Wholesale Food Buyers' Description of the Barriers Preventing Their Organization from Buying More Locally Grown Foods in Central Alabama

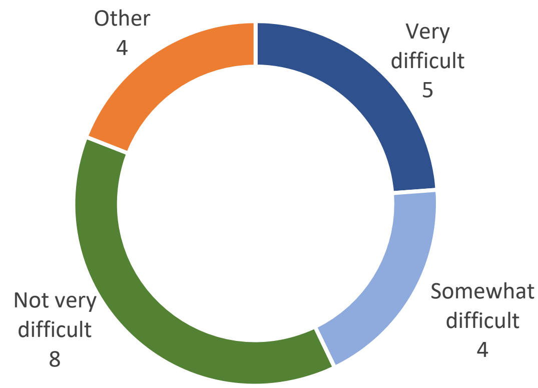
- We purchase through a vendor that is approved by the board. Also, the price of the food is important.
- The local farmers just aren't able to provide enough. The crop sometimes doesn't grow, the weather is making the seasons worse.
- Nothing. I use local foods all the time. It's easy to find.
- We have to order through the pre-approved companies. It's all done through our headquarters.
- Just the quantity that we would need.
- I honestly don't have an answer for that one.
- Mainly price and the availability.
- We buy from a list we are told by corporate to order from. We have to source through them. It's all controlled through corporate.
- Mostly it's because corporate tells us what we are allowed to sell and purchase.
- I think it's because the locals aren't available in bulk.
- We are a chain of nursing home. Our home office is in Florida. We would have to be able to maintain the right amount of produce in order to have enough.
- It's per state regulations for our facility.
- The time. We just can't go to the local markets. There is no local produce service, delivery service, that services quality produce.
- Just having the extra space.
- The availability of the foods.
- It is not really feasible. There isn't enough around, just a lot to get and serve on a regular basis.
- We are always looking for good value as well as good products.
- Our corporate guidelines that are in place. We source from a local service, having to go through them.
- We have guidelines set out by the government/districts. There is documentation and rules that we have to go by.
- I think it's more of knowing what is available and where to get it.
- The availability of the produce.

The description of the barriers preventing Central Alabama wholesale food buyers from purchasing more locally sourced food are real to them. And, unless they are effectively addressed and resolved, a new start-up food hub serving Central Alabama food buyers will not be financially successful. More importantly, these issues must be resolved prior to a new food hub coming to the area. Most all of the buyers surveyed have favorable attitudes about buying locally produced fresh produce and they indicated they would like to increase their purchases of local produce. That is a good starting point. But, if Central Alabama is to have a successful food hub serving the needs of the area's wholesale food buyers, a market-wide awareness campaign and education program will be required prior to any serious consideration about facilities. Part of the education campaign should focus on meeting with buyers who have corporate controlled vendor approval procedures. Determine their requirements for a new food hub getting on their vendor lists, and work to resolve them. In all likelihood, food safety certifications[2], the ability to supply in sufficient quantities, and prompt delivery capabilities will be keys to getting on vendor lists of the larger corporate groups. Local and state elected officials should be asked to use the influence of their offices to assist in getting corporate accounts to cooperate.

LEVEL OF DIFFICULTY BUYERS HAVE EXPERIENCED IN MAKING ARRANGEMENTS TO BUY LOCALLY SOURCED FOOD

When buyers were asked how difficult it has been for them to make arrangements to purchase locally grown food, nine respondents indicated it was either very difficult or somewhat difficult, with eight buyers saying it was not very difficult (see *Figure 24*).

Figure 24: Difficulty of Buying Local



Reasons mentioned by those that indicated it was difficult to make arrangements to buy locally produced products were: not having access/availability of products, not enough time to find product sourcing, regulations that are set forth by corporate/tied into contracts with corporate vendors, and government regulations. Specific comments from buyers explaining why they have experienced difficulty in making arrangements to buy locally sourced food items are listed below (see *Figure 25*).

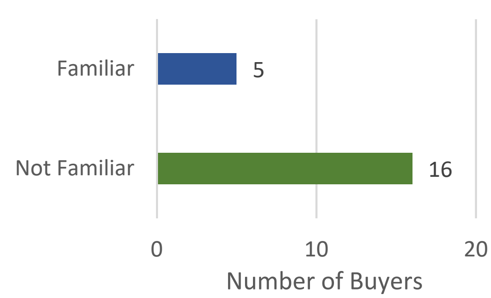
[2] For a summary of food safety requirements potentially impacting farmers selling their produce, see *Section VIII* of this report.

Figure 25: Reasons for Buyers Saying it has Been Difficult for Them to Arrange to Buy Locally Grown Food in Central Alabama

- CMS regulations that are in place. They tell us what we have to buy and purchase.
- Having the time to find local vendors, markets, and farms. We just don't have access to it.
- I just don't have access to it out here.
- It's not easy to get to the places and find food for the restaurant.
- Like I said, there just isn't enough. But I would absolutely love to be able to have fresh produce.
- Sometimes it is just a matter of getting a good product from the local stores we purchase from. The stores don't carry the best produce all the time. They do buy it locally here in state, but it sometimes isn't quality produce.
- The grows have to be documented in order for us to get food from them. They have to have been approved through the guidelines set up through corporate.
- The guidelines don't really give us much room. We have to make sure that the people that we are getting food from are on the list that is approved by our governing bodies. They have to be on the list.
- We are tied into contracts with different vendors and suppliers. We would have to go through a long process of presenting it to the board, tons of paperwork, and just a huge over all process.
- Where to locate it and having access to it.

The above comments by Central Alabama wholesale food buyers suggest that many find that it's a cumbersome process when they want to acquire locally sourced produce. It is much more efficient for the buyers to forego buying locally sourced fruits and vegetables and instead buy their produce from a large wholesale produce vendor on their approved list who may or may not be selling locally sourced products. In the fifteen counties that represent the Central Alabama market area, 376 farmers produced and sold vegetables, while a little more than 257[3] farmers produced and sold fruit, tree nuts, and berries in 2017 (National Agricultural Statistics Service, 2017). A buyer wanting to purchase locally sourced produce may find it necessary to purchase from more than one local farmer in order to acquire the desired mix of produce items, while one produce distributor may be able to supply the full request. The existing produce distribution system places local area farmers at a disadvantage even though buyers may have a preference for buying locally sourced produce. An efficiently operated food hub aggregating a variety of fruits and vegetables from numerous small farmers could possess many of the advantages currently enjoyed by full-service wholesale produce organizations, plus the added advantage of representing a source for locally produced produce.

Figure 26: Proportion of Buyers who are Familiar with Food Hubs



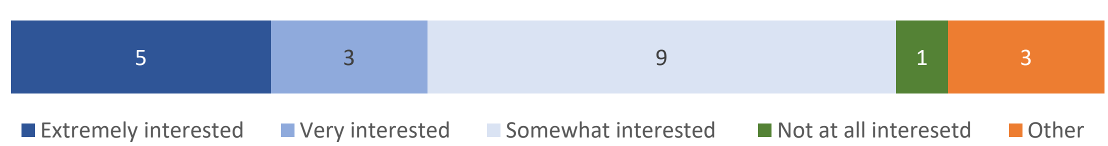
[3] Data for one of the smaller counties (Perry) was not reported in this total.

As shown in *Figure 26*, just five of the twenty-one food buyers surveyed indicated they were familiar with food hubs. This relatively low level of awareness of food hubs among wholesale food buyers is further indication that an information/education campaign will be required prior to starting a food hub in Central Alabama, and, as stated previously, almost one-half (46%) of the local farmers are not familiar with food hubs and how they can be used to help them sell their produce to local buyers.

BUYERS' ATTITUDES TOWARDS PURCHASING LOCALLY SOURCED FOODS FROM A FOOD HUB

- ✓ 8 of 21 buyers surveyed indicated they were either extremely interested or very interested in doing business with a local food hub (see *Figure 27*).
- ✓ 15 of 21 buyers would be willing to work out a plan with a food hub that would help their organization increase their purchases of locally grown food. This could be part of the educational programs to increase awareness and address barriers identified previously.
- ✓ 18 of 21 buyers stated they do not have any reservations about buying fresh locally grown produce from a food hub.
- ✓ 18 of 21 buyers agreed that having a food hub in their area would increase the opportunity for them to buy more locally grown food (after being told ways a food hub could benefit buyers).

Figure 27: Buyers' Level of Interest in Doing Business with a Local Food Hub



SUMMARY

Based on the survey of potential food hub customers from the Central Alabama area, seven out of twenty-one indicated that they are currently purchasing some locally sourced produce. Most of the wholesale food buyers surveyed would like to see their purchases of locally sourced food increase in the future. Buyers noted that the main barriers preventing them from purchasing more locally grown food were lack of produce availability (especially noted was the lack of availability in sufficient quantities) and company/corporate policy or guidelines preventing companies from buying locally sourced produce. A major regional educational campaign targeting growers, buyers, and partners/stakeholders is necessary prior to moving forward. Nine of the twenty-one wholesale food buyers indicated that it had been difficult for them to make arrangements to purchase locally sourced food products. The main reasons buyers stated that it has been difficult for them to make arrangements to purchase locally sourced food included: not having access/availability, not enough time to find product sourcing, and regulations set up by “corporate”.

It should be stressed that currently it is very cumbersome for larger wholesale food buyers to purchase local produce in Central Alabama. And while a food hub can make things less cumbersome, there is initial concern over whether or not the region’s small produce farmers will be able to meet the quantities demanded by large scale buyers. The potential supply issue, coupled with the perceived lack of engagement of key stakeholders, would represent somewhat serious challenges if the Central Alabama food hub were operating today. As noted earlier, sixteen of the twenty-one wholesale food buyers surveyed indicated they are not familiar with a food hub. And on the supply side, close to one-half of the local growers indicated they are unfamiliar with food hubs. The surveys did, however, identify some positive attitudes towards the proposed food hub.

When the twenty-one wholesale food buyers were asked to indicate their level of interest in doing business with a food hub, eight of them said they were either extremely interested or very interested. Further, fifteen out of twenty-one buyers stated they would be willing to work out a plan with a food hub that would help their organization purchase more locally grown food. Finally, eighteen of twenty-one buyers surveyed agreed that having a food hub in their area would increase the opportunity for them to buy more locally grown food.

V. Stakeholder/Partner Survey

Stakeholder/partner discussions of the potential for establishing a food hub in Central Alabama counties actually started with food summits conducted at Auburn University Montgomery by the Central Alabama Regional Planning and Development Commission (CARPDC) in 2016. The "Healthy Foods, Healthy Economics" summits were held in 2016, 2017, and 2018 and were supported by a grant from the USDA. Ms. Pamela Trammell, Community Development Specialist from CARPDC, served as project director for all three summits. Food summit attendees included: university professors, healthcare organizations, public officials including mayors and a member of the Alabama Legislature, state agencies including the Alabama Department of Agriculture, produce growers, various non-profit agencies, school nutritionists, economists, a food hub director, extension service personnel, and food policy advocates.

One of the objectives of the food summits was to focus on a vision to increase fresh food access for all Alabamians. Another objective of the summits focused on increasing the effectiveness of food systems and identifying ways for local produce farmers to expand the sale of fresh fruits and vegetables.

Following the 2016 food summit, working action groups were created to address healthy foods programs that involved input from a diverse group of stakeholders and partners. Suggestions originating from the working action groups included healthy foods accessibility, feasibility, and sustainability. These working action groups met several times to establish goals and strategies and as a result, new avenues to healthy food accessibility and sustainability were discussed. Among the avenues identified were food hubs, food cooperatives, and other means of increasing access to local fruits and vegetables produced by Alabama farmers. Shortly after the 2016 food summit, Ms. Trammell announced that CARPDC was writing a grant to fund a food hub feasibility assessment study for Central Alabama.

In addition to the stakeholder/partner inputs to this food hub feasibility study at the "Healthy Foods, Healthy Economics" summits held in 2016, 2017, and 2018, surveys were conducted with twelve (12) stakeholders/partners in early 2019. These included community-based organizations engaged with local food projects, university agricultural programs, food recovery programs, policy influencers, and nonprofits providing technical assistance to farmers. For a complete list of the stakeholders/ partners participating in the survey, see *Appendix C*.

Ten of the twelve stakeholder organizations surveyed indicated their agency promotes the consumption of locally grown food (see *Figure 28*) and eleven stakeholders indicated their organization is collaborating with other agencies to promote the consumption of locally grown food (see *Figure 29*).

Figure 28: Agency Promotes Consumption of Locally Grown Food

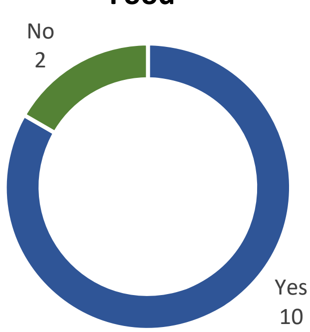
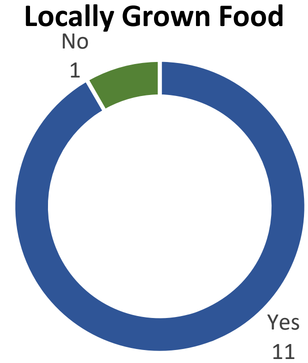


Figure 29: Agency Collaborates to Promote Consumption of Locally Grown Food



All twelve stakeholders/partners surveyed indicated their organization has programs that deal with food insecurity (e.g. research, outreach, etc.). Further, ten of these organizations are currently partnering with another agency to help deal with the issue of food insecurity.

While eleven stakeholders/partners indicated that some restaurants in their area are serving locally grown food, only five mentioned that schools in their community also are serving locally grown food.

Ten of the stakeholders/partners surveyed indicated they were familiar with the concept of a food hub. After defining the concept of a food hub for the other two respondents, eleven of the stakeholders/partners indicated that a Food Hub in their part of the state would increase the availability of locally grown food for area residents.

Lack of access was the barrier mentioned most by stakeholders/partners when asked, "what was preventing local residents from buying more locally grown food." Other barriers mentioned included cost, transportation, legislation, and educating the public about where they can find locally grown foods (see *Figure 30*).

Figure 30: Biggest Barriers Preventing Local Residents from Buying More Locally Grown Food

- Access and cost of the foods.
- Not having the convenience of it being in stores. The ease of buying everything at one time.
- Poverty. Inaccessibility. We have food deserts. A lot of home bound people. It is 40 miles one way to get to food or a grocery store. A lot of people don't have transportation.
- I would guess the distribution and how to get enough of a supply.
- Maybe, I would say access, it shouldn't be a factor of cost. At the food bank people go through and pick out the processed foods. I think they need more access and a little education. They need to know how to eat healthier.
- The price and cost.
- Not enough access and local buying power. Accessibility is the huge issue. We have so many food deserts in the state.
- Access to the food. We studied the state and 1.8 million people have no access to healthy foods. They don't know when it is available at their local stores. The stores used to have it marked, that it was local, and cost less. They don't do that now.
- A lot. Lack of policy in the government. We don't have emphasis from the top down on locally grown food in general. There is no legislation saying we support locally grown foods.
- Access to the locally grown produce. A lot of the time there isn't access to the farmers markets, and they are underserved as far as volume.
- Having available markets.
- The general things like access, transportation, and cost. Then you have education on where the things are available for people to have access and knowledge of what to buy.

Stakeholders/partners believe the biggest barriers preventing local schools from serving more locally grown food include production levels/volume, purchasing policies, and distribution channels (see *Figure 31*).

Figure 31: Biggest Barriers Preventing Local Schools from Buying More Locally Grown Food

- It's part of the nutrition program or what the process is for the food delivery.
- The polices that are in place.
- Lack of awareness. We lack the educational information needed.
- Same basic problem, the distribution.
- I think it might be just a routine to them. They have always gotten food from a supplier. The ease of doing business that way. Getting food from XYZ instead of having to go out and get locally sourced foods.
- Applying consistency.
- There are a number of production issues. We are having crops fail. There are sharp drops in production because of many factors. We have excessive droughts and then heavy rain falls flooding the crops. There is a huge amount of moving parts.
- They don't have the time to source it. Knowing what's available. We need more public awareness.
- Hospitals and schools need the legislation so it's more acceptable to use locally grown foods. Production levels aren't enough right now for wholesale markets in order to keep up with demand. I feel like farmers would need to increase the acreage.
- I think finding the resource for a person to produce what is needed, and producing along the guidelines set up for the school’s use.
- The volume of food that is available. I don't think the volume to be able to serve the schools daily is available as a whole. It's also hard because of the rules and guidelines of what can and can't be use set up at the county/state levels.
- The public schools are designated on a county level for their food needs. The schools individually do not have the authority to decide what or where the food is coming from.

SUMMARY

The idea for a food hub to serve produce farmers and consumers in Central Alabama originated from three “Healthy Foods, Healthy Economics” summits held in 2016, 2017, and 2018. These summits were coordinated by Pamela Trammell with the Central Alabama Regional Planning and Development Commission (CARPDC). One of the objectives of the food summits was to focus on a vision to increase fresh food access for Alabamians. Another complementary objective focused on increasing the effectiveness of local food systems and finding ways for local produce farmers to gain access to expanded markets for their fresh fruits and vegetables. Shortly after the 2016 food summit, Ms. Trammell announced that CARPDC was writing a grant to study the feasibility of a food hub in Central Alabama.

In addition to stakeholders attending the three summits, twelve additional stakeholders/partners were interviewed for this feasibility assessment. A big majority of those surveyed indicated that their agency promotes the consumption of locally grown food and that they collaborate to promote the consumption of locally grown food.

Ten of the twelve stakeholder/partner agencies stated that they are currently partnering with another agency to help deal with the issue of food insecurity. When compared to the survey of growers and wholesale buyers, the stakeholder/partner participants seemed to be more familiar with food hubs. Stakeholders noted that the barriers preventing local residents from buying more locally grown food included lack of access, cost, and transportation. The stakeholders/partners believe that the biggest barrier preventing local schools from serving more locally grown food include availability (volume available), purchasing policies of schools, as well as existing distribution channels.

Several in-depth personal interviews were conducted with other important stakeholders/partners. One of these interviews was conducted with individuals who operate the Farm Food Collaborative Food Hub in Huntsville (see *Appendix D*). This food hub is the only one in Alabama and our interview with Ms. Martin-Lane and her staff brought out the fact that operating a food hub in Alabama is very challenging. And, without partnering opportunities and a continuous inflow of grant money, gifts, and donations, sustainability would be doubtful. The Huntsville Farm Food Collaborative is fortunate to have directors and workers who truly know how to run a lean and flexible organization.

VI. Description of Potential Wholesale Buyers for Locally Sourced Food in Central Alabama

This section of the feasibility assessment contains data describing five potential wholesale market segments for locally sourced produce in the Central Alabama area. Segments of demand discussed are K-12 area schools, area hospitals, area nursing homes and assisted living facilities, area grocery stores and area manufacturing facilities.

K-12 STUDENT ENROLLMENT IN CENTRAL ALABAMA

As can be seen in *Figure 32*, school enrollment was estimated to be more than 813,000 in Alabama for children K-12 in 2017 and approximately 11% of these children attended a private school. In the Central Alabama market area, the number of children enrolled in K-12 was more than 106,000 in 2017 with more than 14% of these attending a private school. (American Community Survey 5-Year Estimates, 2017)

Figure 32: State and Regional School Enrollment

Area	Total K-12 Enrollment	In Public Schools	Percent In Public Schools	In Private Schools	Percent in Private Schools
Alabama	**813,144**	**724,361**	**89.1%**	**88,783**	**10.9%**
Central Alabama Food Hub Market Area	**106,151**	**91,189**	**85.9%**	**14,962**	**14.1%**
Autauga	10,502	9,028	86.0%	1,474	14.0%
Bullock	1,499	1,419	94.7%	80	5.3%
Butler	3,331	2,859	85.8%	472	14.2%
Chilton	7,701	7,322	95.1%	379	4.9%
Coosa	1,508	1,455	96.5%	53	3.5%
Crenshaw	2,471	2,216	89.7%	255	10.3%
Dallas	7,731	6,786	87.8%	945	12.2%
Elmore	13,773	11,637	84.5%	2,136	15.5%
Lowndes	1,785	1,533	85.9%	252	14.1%
Macon	2,385	2,270	95.2%	115	4.8%
Montgomery	38,592	30,869	80.0%	7,723	20.0%
Perry	1,715	1,570	91.5%	145	8.5%
Pike	4,668	4,289	91.9%	379	8.1%
Tallapoosa	6,311	6,084	96.4%	227	3.6%
Wilcox	2,179	1,852	85.0%	327	15.0%

(American Community Survey 5-Year Estimates, 2017)

During the 2013-2014 academic year, the total local food expenditures for Alabama schools was just over $197 million (see *Figure 33*). The total amount spent by schools that year buying local foods (including milk) was $5.5 million, which is just 2.8% of all food expenditures. In contrast to the total U.S., the percent spent buying local sourced food was 11.4% of total food expenditures. When this same analysis is conducted excluding local milk expenditures from the calculation base, Alabama schools spent less than one million dollars ($835,800) on locally sourced food, which is just four tenths (0.4%) of a percent of the schools' total food expenditures. In contrast to the total U.S. when local milk expenditures are excluded from the calculation base, 4.4% of total food expenditures were for locally sourced food. (USDA Farm to School Census, 2015) Schools that have a commitment to USDA farm to school program will typically purchase more local foods.

Figure 33: Farm To School Food Expenditures Analysis

	United States	Alabama
Total Expenditures	$6,856,334,360	$197,192,239
Total Local Food, Including Milk	$780,354,650	$5,560,552
Percent Expenditures for Local Foods, Including Milk	11.4%	2.8%
Total Local Food, Excluding Milk	$302,259,758	$835,800
Percent Expenditures for Local Foods, Excluding Milk	4.4%	0.4%

(USDA Farm to School Census, 2015)

AREA HOSPITALS

In 2018, there were 15 hospitals located within the fifteen counties representing the Central Alabama food hub market area (see *Figure 34*). Collectively, 15,716 staffed beds at these facilities accounted for approximately 278,000 patient days. (Individual Hospital Statistics for Alabama, 2018)

Figure 34: State and Regional Hospital Statistics 2018
(Non-Federal, Short-Term, Acute Care Hospitals)

Area	Number of Hospitals	Staffed Beds	Patient Days	Total Discharges
Alabama	**92**	**15,716**	**2,839,985**	**587,455**
Central Alabama Food Hub Market Area	**15**	**1,509**	**277,935**	**62,235**
Autauga	1	50	14,352	3,295
Bullock	1	54	2,685	572
Butler	1	57	2,928	853
Chilton	1	26	2,332	742
Coosa	0	-	-	-
Crenshaw	1	49	1090	311
Dallas	1	163	17,576	5,100
Elmore	2	80	6,432	1,634
Lowndes	0	-	-	-
Macon	0	-	-	-
Montgomery	3	822	209,877	44,258
Perry	0	-	-	-
Pike	1	97	7,323	1,889
Tallapoosa	2	90	12,849	3,409
Wilcox	1	21	491	172

(Individual Hospital Statistics for Alabama, 2018)

AREA NURSING HOMES AND ASSISTED LIVING FACILITIES

The Central Alabama area is home to 73 nursing homes and assisted living facilities. These facilities have over 5,000 licensed beds and serve meals to patients and staff. Nine of these facilities were included in the survey of wholesale food buyers described earlier (see *Figure 35*). (Alabama Department of Public Health, n.d.)

Figure 35: State and Regional Nursing Home and Assisted Living Facility Statistics 2019

Area	Number of Facilities	Licensed Beds
Alabama	**529**	**37,581**
Central Alabama Food Hub Market Area	**73**	**5,131**
Autauga	6	315
Bullock	1	123
Butler	5	269
Chilton	3	233
Coosa	1	72
Crenshaw	2	167
Dallas	5	389
Elmore	6	404
Lowndes	1	72
Macon	1	111
Montgomery	28	1,720
Perry	1	162
Pike	4	282
Tallapoosa	8	717
Wilcox	1	95

(Alabama Department of Public Health, n.d.)

AREA GROCERY STORES

As noted in *Figure 36*, the Central Alabama market area contains 145 grocery stores. While some of the retail sales data have been suppressed in an effort to protect confidentiality, it should be noted that produce sales in a grocery store represents approximately 10% of total grocery sales. (American FactFinder, 2012)

Figure 36: State and Regional Grocery Store Sales 2012

Area	Number of Establishments	Sales Volume ($1,000)
Alabama	**1,055**	**5,340,811**
Central Alabama Food Hub Market Area	**145**	**(D)[1]**
Autauga	6	(D)[1]
Bullock	3	(D)[1]
Butler	3	(D)[1]
Chilton	11	35,606
Coosa	1	(D)[1]
Crenshaw	5	18,884
Dallas	13	(D)[1]
Elmore	11	(D)[1]
Lowndes	2	(D)[1]
Macon	5	(D)[1]
Montgomery	52	264,005
Perry	4	10,574
Pike	8	(D)[1]
Tallapoosa	11	(D)[1]
Wilcox	10	(D)[1]

(American FactFinder, 2012)
1 Data not available at the county level.

AREA FOOD MANUFACTURING FACILITIES

The Bureau of Labor Statistics reported that there were 45 food manufacturing companies located in the fifteen county Central Alabama area (see *Figure 37*) (Bureau of Labor Statistics, 2018). Some of the 45 facilities may represent markets for fresh produce used in their manufacturing processes. Perhaps equally significant is the fact that some large manufacturing companies will often have an in-house food service offering for employees.

Figure 37: State and Regional Food Manufacturing Establishments 2018

Area	Animal Food Mfg.	Grain and Oilseed Milling	Sugar & Confec-tionary Product Mfg.	Fruit and Veget-able Pre-serving	Dairy Product Mfg.	Animal Process ing	Sea-food Product Prep & Pkg.	Bakeries	Other Food Mfg.	TOTAL FOOD MFG.
Alabama	**40**	**9**	**11**	**12**	**18**	**88**	**34**	**98**	**41**	**351**
Central Alabama Food Hub Market Area	**7**	**3**	**4**	**3**	**1**	**11**	**1**	**10**	**5**	**45**
Autauga	0	0	0	0	0	1	0	0	0	**1**
Bullock	0	1	0	0	0	2	0	1	0	**4**
Butler	0	0	0	0	0	0	0	0	0	**0**
Chilton	0	0	0	0	0	1	0	0	0	**1**
Coosa	0	0	1	0	0	0	0	0	0	**1**
Crenshaw	0	0	0	0	0	0	0	1	0	**1**
Dallas	1	1	1	0	0	2	0	0	1	**6**
Elmore	0	0	0	0	0	0	0	3	0	**3**
Lowndes	2	0	2	0	0	1	0	0	0	**5**
Macon	0	0	0	0	0	0	0	0	0	**0**
Montgomery	2	0	0	1	0	3	0	3	1	**10**
Perry	1	0	0	0	1	0	1	0	1	**4**
Pike	0	1	0	1	0	0	0	1	2	**5**
Tallapoosa	1	0	0	1	0	0	0	1	0	**3**
Wilcox	0	0	0	0	0	1	0	0	0	**1**

(Bureau of Labor Statistics, 2018)

VII. Conclusions and Recommendations

CONCLUSIONS

The major conclusion reached from this assessment is that it would not be economically feasible to operate a food hub in Central Alabama at this time. The following discussion analyzes the reasons for this conclusion and proposes recommendations for improving the prospect that a food hub can be successful in the area.

A big majority (89%) of fresh fruits and vegetables consumed by residents of the Central Alabama market area are grown in California, Florida, Mexico, and beyond. One of the issues affecting the supply of locally sourced produce in the area is undoubtedly related to the relatively large proportion of small farms in Central Alabama. Based on the produce farmers surveyed, 78% grow produce on 50 acres or less and 62% reported income in 2018 of less than $25,000. When all types of farms are considered, the average sales per farm is somewhat high at $128,035. The area has 20 farmer's markets and 18 CSAs who are selling local foods at retail to end-users. And, among the farmers surveyed, most indicated they are selling their local produce through on-farm sales.

The survey of wholesale and institutional food buyers revealed that only about one out of three are currently buying locally raised fruits and vegetables. There are barriers to overcome for area farmers selling local food to these buyers. However, wholesale and institutional food buyers likely represent the greatest potential to increase the proportion of locally sourced food consumed in the market area.

Small farms individually are usually unable to supply the quantity of fresh food items demanded by the larger wholesale and institutional food buyers. However, aggregators can assist the small area farmers by collecting quantities of fresh food items from several producers enabling them to collectively supply the volumes requested by wholesale and institutional food buyers. One of the more important functions of a food hub is aggregation. And, there is little doubt that key stakeholders in the Central Alabama market can potentially benefit from other services provided by a food hub. However, before a food hub in Central Alabama can have a reasonable chance of becoming a sustainable economic entity, there must be indications that there is a buy-in among key stakeholders. There must be evidence of community engagement particularly among farmers and wholesale food buyers.

There are indicators from both the survey of farmers and the survey of wholesale and institutional food buyers that food hubs and the role they play in the marketing of agricultural food products are not well known. Close to one-half of the produce farmers surveyed were not familiar with food hubs. The wholesale and institutional food buyers were even less familiar with food hubs (16 out of 21 not familiar). Further, just seven of the twenty-one food buyers surveyed have purchased locally raised food items. However, there are some positive findings from the surveys. First, a majority of farmers expressed a willingness to expand acreage devoted to raising fruits and vegetables and indicated they would cooperate with suggested ways to increase local output in other ways. While the wholesale buyers were generally not familiar with food hubs, they nevertheless expressed favorable opinions toward doing business with them.

Before a decision is made to move forward and establish a food hub in Central Alabama, there needs to be good indication of strong community and stakeholder engagement with the idea. Planners will get one shot at establishing a viable regional food hub in Central Alabama and the chances of making the right decision will be significantly enhanced when its assured that the community is truly engaged with the decision to move forward. An in-depth interview with Carey Martin-Lane, director of the Huntsville food hub (Farm Food Collaborative) is included in this report (see *Appendix D*). Ms. Martin-Lane discusses in her interview that it is a battle every day to keep things going and as she notes, after eight years of operation, “we are not currently securing enough grant funds to cover operating costs not covered by program revenue.” One of our recommendations discussed below is for establishing a web-based capacity to promote and monitor the site's activity and exchange of ideas pertaining to food hubs as one way to assess progress on the level of community and stakeholder engagement.

RECOMMENDATIONS

The most important recommendation leading to the potential establishment of a food hub in Central Alabama is to first ***build engagement*** in the concept of a food center/food hub. The best way to build engagement is through education programs, creating networking opportunities, aggregation assistance to help small farmers, and developing a mechanism to identify individual and/or groups who want to play a role in promoting, organizing, owning, and/or managing a food hub in Central Alabama.

- ✓ **Aggregation**
  Small farmers especially, can benefit from an initial aggregation effort. The target for this effort includes farmers trying to access wholesale and institutional markets. As previously noted, schools in the area are underperforming when it comes to using locally sourced food in their lunch programs. One small producer may not be able to meet volume specifications but through aggregation of products with other farmers, all can benefit. The good thing about aggregation activities is not only are they key functions of a food hub, they are also visible activities allowing both producers and buyers to observe some initial benefits of establishing a food hub.

- ✓ **Education Programs**
  A sizeable proportion of both producers and wholesale food buyers who were surveyed for this study were not familiar with food hubs. Programs need to be implemented that create awareness, interest, and benefits of having a food hub located in the area. Likewise, strong consumer awareness programs should be implemented in the market area as well.

- ✓ **Networking and Information Exchange**
  We recommend the development of a web-based capacity to promote the exchange of ideas and opportunities pertaining to the proposed food hub. Producers, buyers, and others could use the site to discuss general farming issues, access to labor, training, equipment sharing, shared processing and storage opportunities. By monitoring the discussions pertaining to food hubs, planners will be able to assess engagement intensity and identify individuals and/or groups who have expressed interest in playing a role in promoting, organizing, owning, and/or managing the facility.

VIII. Food Safety

When selling locally sourced produce, local, state, and federal regulations must be adhered to in order to reduce the risk of a disease outbreak. Food hub managers must have a global understanding of the guidelines and regulations surrounding storing, packing, and shipping of food as well as post-harvest handling techniques (Pressman & Lent, 2013).

FOOD SAFETY MODERNAZATION ACT (FSMA)

The Food Safety Modernization Act (FSMA) of 2011 gives food-safety regulatory authority to the Food and Drug Administration (FDA). FSMA guidelines are currently being implemented which create standards for growing, harvesting, packing, and holding produce, as well as rules for the operation of food-processing facilities. For more information on FSMA, see the U.S. Food and Drug Administration's *Standards for the Growing, Harvesting, Packing, and Holding of Produce for Human Consumption* (Food and Drug Administration, 2018).

GAPSs AND GHPs

Good Agricultural Practices (GAPs) and Good Handling Practices (GHPs) are voluntary sets of standards established by the USDA. GAP and GHP are voluntary audits that verify that fruits and vegetables are produced, packed, handled, and stored as safely as possible to minimize risks of microbial food safety hazards. The audits verify adherence to the recommendations made in the U.S. Food and Drug Administration's *Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables* (Center for Food Safety and Applied Nutrition, 1998) and industry recognized food safety practices. Many institutional markets require growers and distribution facilities to be GAP or GHP certified. To apply for certification, an audit can be requested through the USDA (USDA Agricultural Marketing Service, n.d.).

ON-FARM FOOD SAFETY PLANS

A Food Safety Plan (FSP) consists of the primary documents in a preventive controls food safety system that provides a systematic approach to the identification of food safety hazards that must be controlled to prevent or minimize the likelihood of foodborne illness or injury. It contains a collection of written documents that describes activities that ensure the safety of food during manufacturing, processing, packing, and holding (Office of Food Safety, 2016). For information and templates for writing a food safety plan, visit www.onfarmfoodsafety.org (Create a Food Safety Manual, 2019).

HACCP

Hazard Analysis and Critical Control Points (HACCP) is a preventive food safety strategy that is a systematic approach to the identification and assessment of the risk of hazards from a particular food or food production process or practice and the control of those hazards that are reasonably likely to occur. HACCP systems have been mandated by U.S. Federal regulations issued by the Food and Drug Administration (FDA) for seafood and juice and by the Food Safety and Inspection Service (FSIS) for meat and poultry (Office of Food Safety, 2016). Although an FSP and a HACCP plan are similar, they are not identical.

TRACEABILITY

Traceability is the ability to follow the movement of a food product through the stages of production, processing, and distribution. It is often needed to identify the sources of food contamination and the recipients of contaminated food in product recalls and seizures (Department of Health and Human Services, 2009).

ORGANIC PRODUCTS

USDA organic products have strict production and labeling requirements. Organic products must meet the following requirements:

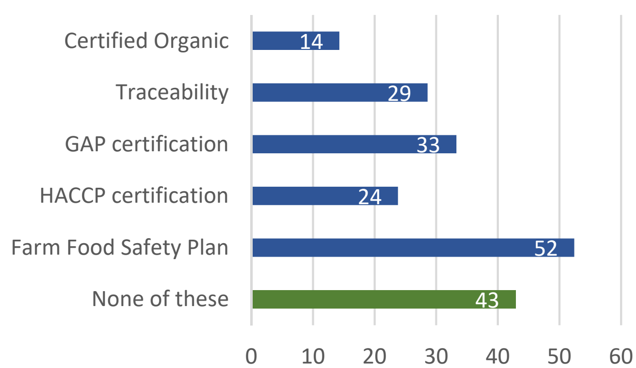
- ✓ Produced without excluded methods, (e.g., genetic engineering, ionizing radiation, or sewage sludge).
- ✓ Produced using allowed substances.
- ✓ Overseen by a USDA National Organic Program-authorized certifying agent, following all USDA organic regulations.

National Organic Program (NOP) standards for organic certification under the USDA National Organic Program can be found in the *USDA NOP Standards Manual* (USDA Agricultural Marketing Service, 2018).

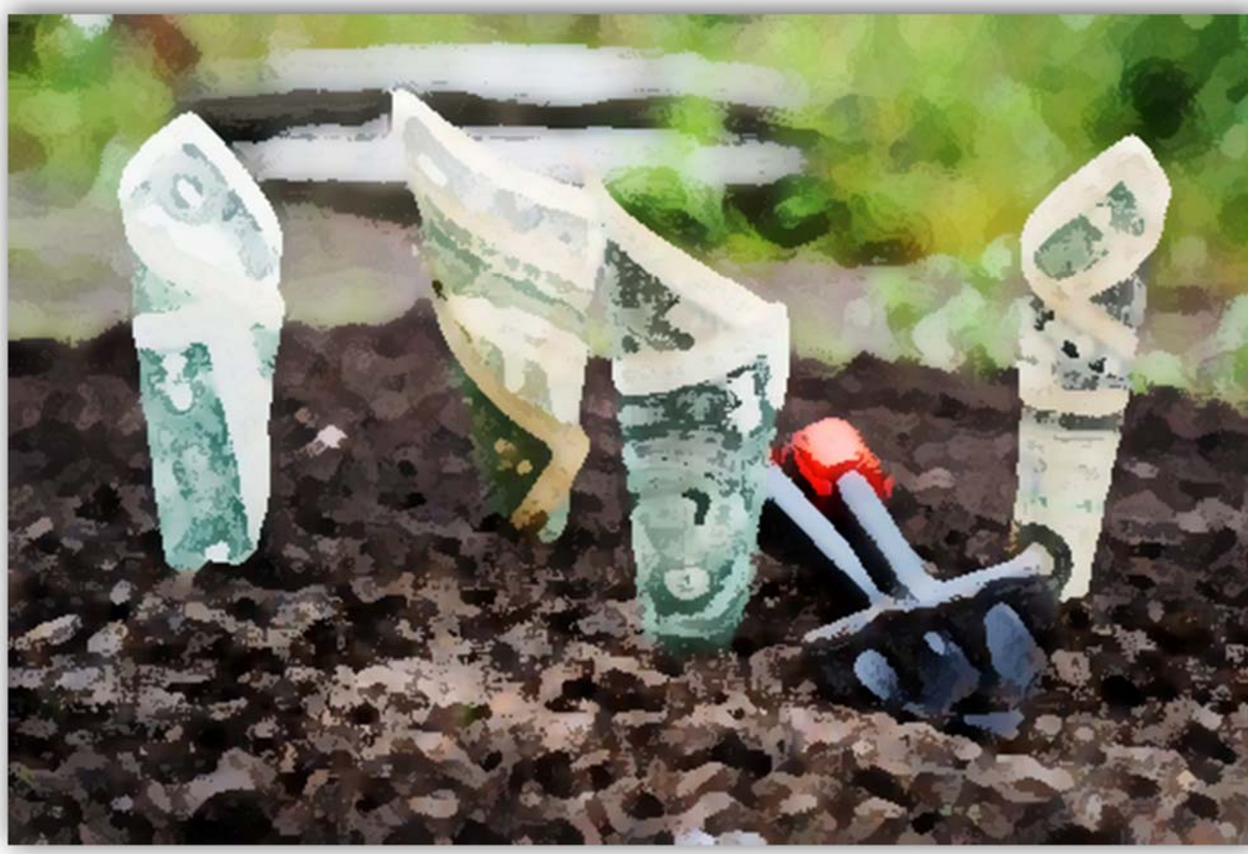
SOURCING REQUIREMENTS

When potential buyers in Central Alabama were surveyed about their sourcing requirements, most (57%) required some type of sourcing documentation (see *Figure 38)*. More than one-half (52%) required a farm food safety plan. Other requirements included GAP certification (33%), traceability (29%), HACCP certification (24%), and certified organic (14%).

Figure 38: Sourcing Requirements of Central Alabama Wholesale Buyers



SOURCE: Southeast Research, Inc.2019 Survey of Wholesale Buyers



IX. Funding

There are many different aspects of a food hub that could qualify for various types of local, state, and national funding.

Potential USDA programs to support food hub development include:

Local Food Promotion Program Implementation Grant - Used to establish a new local and regional food business enterprise, or to improve or expand an existing local or regional food business enterprise.
https://www.ams.usda.gov/services/grants/lfpp

Rural Business Opportunity Grant – Opportunity grants can be used for: community economic development, technology-based economic development, feasibility studies and business plans, leadership and entrepreneur training, rural business incubators, long-term business strategic planning.
https://www.rd.usda.gov/programs-services/rural-business-development-grants

Rural Business Enterprise Grant - Economic development for the creation or retention of rural jobs and provision of assistance of rural business.
https://www.rd.usda.gov/recovery/rural.html

Value Added Producer Grant - Helps agricultural producers enter into value-added activities related to the processing and/or marketing of new products. The goals of this program are to generate new products, create and expand marketing opportunities, and increase producer income. https://www.rd.usda.gov/programs-services/value-added-producer-grants

Farmer's Market Promotion Program - Increase domestic consumption of, and access to, locally and regionally produced agricultural products, and to develop new market opportunities for farm and ranch operations serving local markets by developing, improving, expanding, and providing outreach, training, and technical assistance to, or assisting in the development, improvement, and expansion of, domestic farmers markets, roadside stands, community-supported agriculture programs, agritourism activities, and other direct producer-to-consumer market opportunities. https://www.ams.usda.gov/services/grants/fmpp

Community Food Projects Competitive Grants Program - The primary goals of the CFP are to: Meet the food needs of low-income individuals through food distribution, community outreach to assist in participation in Federally assisted nutrition programs, or improving access to food as part of a comprehensive service; Increase the self-reliance of communities in providing for the food needs of the communities; Promote comprehensive responses to local food access, farm, and nutrition issues; and Meet specific state, local or neighborhood food and agricultural needs including needs relating to: Equipment necessary for the efficient operation of a project; Planning for long-term solutions; or The creation of innovative marketing activities that mutually benefit agricultural producers and low-income consumers. https://nifa.usda.gov/funding-opportunity/community-food-projects-cfp-competitive-grants-program

Community Facilities Direct Loan and Grant Program - Funds can be used to purchase, construct, and / or improve essential community facilities, purchase equipment and pay related project expenses. Examples of essential community facilities include: local food systems such as community gardens, food pantries, community kitchens, food banks, food hubs or greenhouses. https://www.rd.usda.gov/programs-services/community-facilities-direct-loan-grant-program

In addition to grants, loans specifically targeted toward small and/or rural businesses and agriculture include:

Business and Industry Guaranteed Loan Program - Helps provide loans for businesses and cooperative ventures where a loan will keep a business from closing, prevent the loss of employment, or provided expanded job

opportunities. Private lenders are provided loan guarantees by USDA to ensure better terms. Any legal entity (including individuals) is eligible to apply, but restricted to rural cities with populations less than 50,000.
https://www.rd.usda.gov/files/BCP_BI_LEAP_LEAPfaqs.pdf

X. Appendix

A. Farmer/Producer Survey

FARMER/PRODUCER LIST

Below is a list of the forty-six (46) producers/growers that participated in the survey.

Name	Organization
Forest Haynes	
Helen Andrews	Andrews U-Pick
Wendy Robins	Avolon Farms
Edmund Warren	Baldwin Blueberries
Michael Bartlett	Bartlett Farm
Don Driggers	Bee Creek Farms
Jimmy Acker	Bent A Farms
Bud Estis	Blue Barn Natural Foods
Frank Knippenberg	Blue Moon Farm
Kirk Creel	Blue Rooster Farms
Bobby Edmondson	C&B Farm & Produce
Dan Chochester	Cedar Hills Farm
Delby Chambers	Chambers Farm
Hope Lowery	Cottonwood Farm
Bobby Helms	Country Best Farm
George Koulianos	DK Farms
Barbara Reynolds	Dry Valley Vineyard
Edward Smith	E&J Farms
Faye Graham	Faye's Blueberry Farm
Lee Harrison	Garden on Air
Charles Ritch	Goose Pond Farm, LLC
John Burton	Judy Bee's Honey & Berry Farm
Fred Krhut	Krhut Farms
Larry LouAllen	LouAllen Farms
Joan Robertson	Luddite Farm
Greg Lolley	Mayim Farm
D. Mims	Mims Blueberry Farm
B. Keller	Oak Hill Produce
George Brown	Oakachoy Blueberry Farm
Joe Lambrecht	Oakview Farms
Susan Peebles	Peebles Farm
Conya Rawls	Plantn Roots Farm

Name	Organization
Stuart Simms	Pocahontas Produce
Dan Powell	Powell Blueberry Farm
Vaughen Bryant	Red Hills Farm
Mike Reed	Reed Farms
Noell Rogers	Rogers Berry Farm
Dale Speetjens	Shipshape Urban Farm
Jan Hoadley	Slow Money Farm
Carl Stewart	Stewart Farms
Danica Abejon	Sweet City Micros
Stephen Talley	Talley's Farm
Michael Crosby	The Tasteful Garden
James Turk	Turks Produce
Mike Wadsworth	Wadsworth Farms
Keith Zooks	Zooks Orchard

SURVEY INSTRUMENT

This is ______ calling from Southeast Research and we are working with the Central Alabama Regional Planning and Development Commission on a USDA grant to determine the need for a Food Hub in central Alabama. As you know, Food Hubs assist growers of farm products in processing and selling their farm products to the public. Do you have a few minutes to complete our USDA survey?

Your individual responses will be kept confidential and will not be identified with you or your farm.

1. Do you currently grow and sell fresh farm products directly to buyers?
   ◯ Yes→ **SKIP TO Q.3**
   ◯ No
   ◯ Other ____

2. Are you interested in diversifying your farm to grow and sell fresh farm products?
   ◯ Yes
   ◯ No→**TERMINATE**
   ◯ Other ____________________________________→**TERMINATE**
   ◯ Not Sure→**TERMINATE**

3. How long have you been growing and selling fresh farm products?
   ◯ 0-2 years
   ◯ 3-5 years
   ◯ 6-10 years
   ◯ 11-20 years
   ◯ 21-40 years
   ◯ More than 40 years
   ◯ Not Sure

4. What fresh farm products do you currently grow and sell during a typical year? **READ LIST - MARK ALL THAT APPLY**
   ◯ Vegetables
   ◯ Fruits
   ◯ Dairy
   ◯ Eggs
   ◯ Meat
   ◯ Processed Items
   ◯ Flowers/Plants
   ◯ Other (specify) ____

5. What percentage of your fresh farm produce do you currently sell for retail versus wholesale?
   Retail _______% Wholesale _______%

6. How do you distribute your products to local buyers? **READ LIST - MARK ALL THAT APPLY**
   ◯ On-farm sales
   ◯ Farmer's market
   ◯ CSA (Community Supported Agriculture, e.g. food boxes)
   ◯ Directly to restaurants
   ◯ Directly to co-ops
   ◯ Directly to grocery stores
   ◯ Directly to schools
   ◯ Directly to hospitals
   ◯ To a restaurant (intermediated)
   ◯ To a co-op (intermediated)
   ◯ To a grocery store (intermediated)
   ◯ To a school (intermediated)
   ◯ To a hospital (intermediated)
   ◯ Other (specify) ______________________________________

7. Are you familiar with Food Hubs and how they can be used by farmers to help sell their produce to local buyers?
   ◯ Yes→**CONTINUE TO Q.8**
   ◯ No/Not Sure→**READ DESCRIPTION BELOW**

What is a Food Hub?

- Food hubs are the emerging infrastructure for the aggregation, processing, and distribution of local foods
- Food hubs may consist of one or more facilities within an agricultural community of producers and consumers.
- These facilities might include retail vending space, community kitchens, and processing space and equipment as well as warehousing, refrigeration storage space, packaging, and transportation distribution facilities.
- Interest in food hubs is being propelled by increased demand for locally grown foods.

8. If a local Food Hub were reasonably accessible to your farm and offered a fair price, how would you describe your level of interest in selling fresh farm products through a Local Food Hub? Are you…
   ◯ Very interested
   ◯ Somewhat interested
   ◯ Not very interested or
   ◯ Not at all interested in this?→**SKIP TO Q.23**

9. What amount of the following fruits and vegetables could you make available to sell through a local Food Hub in 2019?

	LBS AVAILABLE 2019
Blueberries	
Broccoli	
Cabbage	
Cantaloupe	
Carrots	
Cauliflower	
Cherry Tomatoes	
Collard Greens	
Corn	
Cucumbers	
Green Beans	
Kale	

	LBS AVAILABLE 2019
Lettuce	
Onions	
Peaches	
Peas	
Pears	
Peppers	
Potatoes	
Pumpkins	
Radish	
Spinach	
Squash (all varieties)	
Strawberries	
Tomatoes	
Turnip Greens	
Watermelon	
Zucchini	
Other (specify)	

10. Besides fresh fruits and vegetables, are there other fresh farm products that you could make available to sell through a local Food Hub next year?
   ◯ Yes
   ◯ No/Not Sure→**SKIP TO Q.12**

11. List products and estimated amount (pounds) of each.

	LBS AVAILABLE 2019

12. Which of the following markets would you like to expand your sales? Would that be… **READ LIST**
   ◯ Individual consumers (on-farm, CSA, farmers markets)
   ◯ Businesses (restaurants, co-ops, grocery stores)
   ◯ Institutions (schools, hospitals)
   ◯ None
   ◯ Not Sure

13. If a local Food Hub offered facilities to do processing or to help you with value-added activities, how interested would you be in using these facilities? **READ LIST**
    - ◯ Very interested
    - ◯ Somewhat interested
    - ◯ Not very interested
    - ◯ Not at all interested

14. Assuming a fair price, using your above quantity estimates, how many acres could you devote to growing food for a local Food Hub in 2019? Please provide a low-end estimate and a high-end estimate.
    Low-end estimate ___________
    High-end estimate ___________

15. If you received help with processing, distribution, or marketing, could you expand production of your fresh farm products?
    - ◯ Yes→By what percentage could you expand output? _______%
    - ◯ No/Not Sure

16. A local Food Hub could also offer a variety of other services to help local growers improve their business, increase sales, and strengthen the local food system. Which of the following additional Hub activities would you be interested in? **READ LIST - MARK ALL THAT APPLY**
    - ◯ Using a commercial kitchen and other facilities for growers to process produce and add value to your products
    - ◯ Receiving education in key business skills including marketing, financial management, etc.
    - ◯ Connecting to new local buyers
    - ◯ Participating in educational activities in food preservation, cooking, and nutrition, etc.
    - ◯ None of the above **(DO NOT READ)**

17. What are your greatest difficulties in expanding sales and profits of your fresh farm products? **READ LIST** ***MARK ALL THAT APPLY***
    - ◯ Increasing production
    - ◯ Connecting to buyers
    - ◯ Business planning
    - ◯ Advertising/marketing
    - ◯ Refrigerated storage space
    - ◯ Reducing spoilage of farm output
    - ◯ Other (specify) ____
    - ◯ None/Nothing/No difficulties

18. What would make you more likely to participate in selling produce through a local Food Hub? **READ LIST**
    - ◯ If Hub were grower-owned
    - ◯ If Hub were owned by local residents/businesses
    - ◯ If Hub were a grower-owned cooperative
    - ◯ If you were offered the opportunity to become an investor in or a part owner of the Hub
    - ◯ If the Hub were able to pick up produce from your farm
    - ◯ If facilities were available at the Hub for you to process or add-value to your produce
    - ◯ All of the above
    - ◯ Nothing matters as long as you get a fair market price for your produce

19. Would you be willing to participate in preseason crop planning with a local Food Hub and other growers?
    - ◯ Yes
    - ◯ No

20. Are you familiar with some ways farmers use to extend the growing season for their farm produce?
    - ◯ Yes
    - ◯ No/Not Sure→**SKIP TO Q.23**

    <u>Extending the Growing Season</u>: Produce farmers can extend their growing season for up to 50 days by growing their produce in a controlled environment.

21. Which of the following best describes you with respect to season extension… **READ LIST**
    - ◯ I have some produce grown in season extension structures
    - ◯ I do not use seasonal extension

22. If demand were identified, would you invest in season extension?
    - ◯ Yes
    - ◯ No

23. What was your estimated total dollar income from local sales in 2018?
    - ◯ $0-$1k
    - ◯ $1k-$5k
    - ◯ $5k-$10k
    - ◯ $10k-25k
    - ◯ $25k-$50k
    - ◯ $50k-$100k
    - ◯ More than $100k
    - ◯ Not Sure/Refused

24. What is the size of your farm that's available for growing fresh farm products?
    - ◯ 1 to 10 acres
    - ◯ 11 to 50 acres
    - ◯ 51 to 100 acres
    - ◯ 101 to 250 acres
    - ◯ 251 to 500 acres
    - ◯ 501 to 1000 acres
    - ◯ More than 1000 acres

B. Buyer Survey

BUYER LIST

Below is a list of the twenty-one (21) buyers that participated in the survey.

Name	Organization
Tracey Deramus	Autauga Academy
Tammy Silas	Autumn Place Assisted Living
Cynthia Irby	Camden Nursing Facility
Marsha Graham	Capitol Oyster Bar
Gay Harvel	Country Mart
Dr. Latonia Thrash	Dallas County Schools
Toni Peoples	Dave's Market
Janett Malpartida	D'Road Café
Pat Welch	Greensprings Assisted Living
Jeffrey Haynes	Jackson Hospital
Jean Bradley	Jim 'N Nick's Bar B-Q
Mark Pate	John Knox at Arrowhead
Oland Kelly	Kelly's Crossroads Grocery
Wendy Duncan	Oak Grove Inn
Bill Nehilla	Publix
Iza Coleman	Save-A-Lot
Jordan East-Thomas	Tallassee Health and Rehabilitation, LLC
Paris Bell	The Gables at Charlton Place Assisted Living Community
Ronnie Stone	The Harbor at Hickory Hill
Ronda Stanley	Warren Manor Health and Rehabilitation Center
Donnie Johnson	Winn Dixie

SURVEY INSTRUMENT

This is _____ calling from Southeast Research. I am assisting the Central Alabama Regional Planning and Development Commission with a USDA grant to study the demand for locally grown foods in central Alabama. As part of this study, we are surveying ____ (insert business type) in central Alabama. Your input is necessary in order for us to assess the demand for local foods. Do you have a few minutes to give us your opinion on this issue?

Type of business/organization:

◯ Distributor
◯ Grocer (corporate)
◯ Grocer (independent)
◯ Institutional Food Service (health care)
◯ Institutional Food Service (schools)
◯ Institutional Food Service (other)
◯ Restaurant (corporate)
◯ Restaurant (franchise)
◯ Restaurant (independent)
◯ Other (specify) _________________

1. Do you currently purchase any locally raised or produced food for your _____ (insert business type)?
   ◯ Yes
   ◯ No
   ◯ Not sure

2. What do you feel are the biggest barriers that might be preventing your _____ (insert business type) from buying more locally grown food?
   ____
   ____

3. For 2018, what was your estimated annual budget for all food purchases?
   ____

4. For 2018 approximately what percentage of your food purchases were for locally-grown food? __________________

5. Looking forward over the next year or so, would you like to see your purchases of locally grown foods to…
   ◯ Increase a lot
   ◯ Increase some
   ◯ Stay about the same
   ◯ Decrease
   ◯ Other/Not Sure

6. From your experience, how difficult has it been to make arrangements to buy locally grown food for your _____ (insert business type)?
   ◯ Very difficult
   ◯ Somewhat difficult
   ◯ Not very difficult→**SKIP TO Q.8**
   ◯ Other (specify) ____________________________________→**SKIP TO Q.8**

7. Can you explain the reasons that it's difficult for you to arrange to buy locally grown food for your _____ (insert business type)?
   ____
   ____

8. Are you familiar with a food hub?
   ◯ Yes
   ◯ No
   ◯ Not sure

9. As you may know, food hubs make locally-produced food products easier to access and less expensive for larger buyers so that they can satisfy end-consumer demand for local foods. In your opinion, would a food hub in your area increase the opportunity for you to buy more locally grown food for your _____ (insert business type)?
   ◯ Yes
   ◯ No
   ◯ Not sure

10. What is your level of interest in doing business with a local food hub that maintains a supply of fresh, locally grown produce?
    ◯ Extremely interested
    ◯ Very interested
    ◯ Somewhat interested
    ◯ Not very interested
    ◯ Not at all interested
    ◯ Other ____

11. Would you and your staff be willing to work out a plan with a local food hub that will help your _____ (insert business type) increase their purchases of locally grown food?
    ◯ Yes
    ◯ No→Why not? ____
    ◯ Not Sure

12. Do you have any reservations about buying fresh, locally grown produce from a food hub?
    ◯ Yes→Explain. ____
    ◯ No
    ◯ Not Sure

13. Which of the following sourcing requirements are relevant to you **(MARK ALL THAT APPLY)**?
    - ◯ Certified organic produce?
    - ◯ Traceability?
    - ◯ GAP certification?
    - ◯ HACCP certification?
    - ◯ Farm Food Safety Plan?
    - ◯ None of these

C. Stakeholder/Partner Survey

STAKEHOLDER/PARTNER LIST

Below is a list of the twelve (12) stakeholders that participated in the survey.

Name	Organization	Affiliate
Melodie Agnew	Urban Ministry	
Russell Bean	Alabama SARE	Tuskegee University
Ann Cooper	River Region United Way	
Joel Cuffey	Auburn University	Department of Agricultural Economics and Rural Sociology
Susan Forbes	O' Grow Farms	
Robyn Hyden	Alabama ARISE	
Ayanara Majumdar	Alabama SARE	Auburn University
Rhonda Mann	VOICES for Alabama's Children	
Carey Martin	Alabama Farm to School Network	North Alabama Food Bank
Rudy Pacumbaba	Alabama SARE	Alabama A&M University
Jimmy Smitherman	Alabama Cooperative Extension	
Molly Stone	The Wellness Coalition	

SURVEY INSTRUMENT

This is _____ calling from Southeast Research. I am assisting the Central Alabama Regional Planning and Development Commission with a USDA grant to study the distribution system for locally grown fruits and vegetables. As part of this study, we are surveying stakeholder organizations. Do you have time to give us your opinion on this issue?

1. Does your agency promote the consumption of locally grown food?
   - ◯ Yes
   - ◯ No
   - ◯ Not sure

2. Is your agency collaborating with other agencies to promote the consumption for locally grown food?
   ◯ Yes
   ◯ No
   ◯ Not sure

3. Does your agency have programs that deal with food insecurity? (e.g. Research, outreach, etc.)
   ◯ Yes
   ◯ No
   ◯ Not sure

4. Are you currently partnering with another agency to help deal with the issue of food insecurity?
   ◯ Yes→**SKIP TO Q.6**
   ◯ No
   ◯ Not sure→**SKIP TO Q.6**

5. Do you think that your agency would be willing to partner with other agencies to work on the issue of food insecurity?
   ◯ Yes
   ◯ No
   ◯ Not sure

6. As far as you know, are schools in your community serving locally grown food when in season?
   ◯ Yes
   ◯ No
   ◯ Not sure

7. As far as you know, are restaurants in your area serving locally grown food when in season?
   ◯ Yes
   ◯ No
   ◯ Not sure

8. What do you feel are the biggest barriers preventing local residents from buying more locally grown food?

   ____

   ____

9. And, what do you feel are the biggest barriers preventing local schools from serving more locally grown food?

____

____

10. Are you familiar with a food hub?
   ◯ Yes→**CONTINUE TO Q.11**
   ◯ No→**READ DEFINITION**
   ◯ Not sure→**READ DEFINITION**

What is a Food Hub?

- Food hubs are the emerging infrastructure for the aggregation, processing, and distribution of local foods
- Food hubs may consist of one or more facilities within an agricultural community of producers and consumers.
- These facilities might include retail vending space, community kitchens, and processing space and equipment as well as warehousing, refrigeration storage space, packaging, and transportation distribution facilities.
- Interest in food hubs is being propelled by increased demand for locally grown foods.

11. In your opinion, would a food hub in your part of the state increase the availability of locally grown food for residents?
   ◯ Yes
   ◯ No
   ◯ Not sure

D. Personal Interview with Farm Food Collaborative

Farm Food Collaborative, Huntsville Alabama

Carey Martin-Lane, Natalie Bishnoi, Chyna Smith

1. **Can you explain a little bit about the history of the Farm Food Collaborative?**
   In 2011 a shortage of local produce donations prompted leadership to conduct a viability study to look at implementing a "Red Tomato" style food hub. *(Note a Red Tomato food hub is defined as "*a bridge between producers and consumers that distributes local, source-identified food*. It takes a chain of individuals to move produce from the field to the store shelf. In the local supply chain, there is a relatively new intermediary, focused on helping bring local to market.")* The study found that area farmers had reported net losses for the 5 years prior to 2011, mostly from the loss of sales in wholesale markets. It was clear that some type of community intervention was needed to help mitigate some of these losses and re-connect local farmers with wholesale buyers. The Food Bank of North Alabama convened a diverse stakeholder group comprised of farmers, wholesale buyers, state officials and agriculture advocates, and through regular meetings the group decided to launch the area's first local food hub. The viability study showed that a lean, communications-focused model similar to "Red Tomato" would work best in North Alabama. The main reason local farmers were losing wholesale accounts was because buyers were starting to require Good Agricultural Practices (GAP) certification. This was the first area of expertise that the Farm Food Collaborative tackled and we continue providing food safety technical assistance to farmers to this day. The next request from farmers was help with paperwork and sales. We are constantly pursuing additional wholesale markets for our farmers from schools and daycares to grocery stores and restaurants. We handle all the invoicing and accounts payable/receivable on farmers' behalf, including the time-consuming pursuit of overdue payments from buyers. In response to farmer feedback over the years, we have also started providing marketing support. We develop posters, banners, farmer cards and flyers with consistent branding to help end consumers connect with the farmers who grow their food. One of our main goals is the incremental and sustainable increase of specialty crop production acreage in Alabama and we are happy to report that 86% of our farmers have added acres as a result of working with us and the remaining

14% plan to do so this year. Our original buyer focus was produce distributors but they make decisions based solely on price and are not interested in source identification or farmer promotion. For these reasons and because many distributors have been bought out or closed their doors completely, we shifted our focus to buyers who truly value the local food movement and the hard work that goes into growing produce.

2. **What were some of your major challenges from the idea stage to the successful operation stage?**
   Resources and infrastructure are the hardest elements at any stage in the process. As one of the Food Bank's programs, we are grateful to share some resources with our other programs that work on feeding our neighbors who are hungry today. That being said, those meals programs are also growing, which means we are all very limited on warehouse and cooler space and we share one dock. Because of this, we limit the aggregation and distribution elements of the food hub as much as possible, but some products have to be stored overnight to make the delivery logistics work. Whenever possible, we meet farmers on their farms or at designated spots on the route and deliver directly to buyers utilizing a refrigerated van that was acquired in 2018 and is also shared with our meals programs. Staff is one of the most limiting resources and we happily just added a 3rd employee which will enable tremendous growth and expansion of the Farm Food Collaborative.

3. **Who were the major stakeholders helping you get things started?**
   The original stakeholder group consisted of farmers, wholesale buyers, state officials from the Departments of Agriculture and Education, and community/agriculture advocates. In terms of initial funding we had support from a variety of grants, including ARC, Boeing, USDA, Wallace, and Winrock.

4. **Did you conduct an initial feasibility assessment for the food hub?**
   Yes. The 2011 feasibility study we conducted tested different food hub models and it concluded that a Red Tomato style food hub was best suited. The model was infrastructure light and relationship heavy.

5. **Where has your funding come from?**
   USDA and Boeing grants provided the initial spark that got the food hub off the ground and of course we generate some program revenue from the 10% fee we collect for services. With only 2 employees it is extremely difficult to find the time for grant writing, but we've been lucky to receive support from several government programs (including USDA Farm to School and Specialty Crop Block Grant) as well as corporate foundations throughout the years.

That being said, we are not currently securing enough grant funds to cover operating costs not covered by program revenue.

6. **What is the best advice you can give a group that might want to start a food hub in some other Alabama city?**
   Keep your model lean and flexible and focus your resources on infrastructure and community relationships. If you're able to secure grant funding for mileage, adopt a policy of low or no minimum orders for your buyers. This will help you increase reach and build trust with buyers who may be apprehensive about purchasing local. Always maximize resources especially time. Daisy-chain route logistics whenever possible. If you or a farmer are already going somewhere, add any nearby stops to that route instead of creating a whole separate route. And solicit buyers who are geographically close for the same reason. When making hiring decisions, keep in mind that you need people who are very dedicated to the mission and are multi-talented. FFC employees are forklift certified and can handle all aspects of the operation individually. If your farmers are having a hard time with packaging, apply for grants that will allow you to offset some of that cost burden for them.

7. **What role does technology play in your dealings with farmers and buyers?**
   We keep things simple and straight forward. We utilize QuickBooks Nonprofit Edition for our invoicing and accounts payable, but we've outgrown it. We have to do manual entries for everything, and during harvesting season the number of weekly invoices can grow exponentially. We're changing over to a new system called Local Food Market Place and we hope to roll it out by fall. At the FFC we consider both farmers and buyers our customers and therefore we accommodate their communication preferences in terms of orders and logistics, whether that's email, text, or phone.

8. **What are the main issues a food hub faces dealing with farmers?**
   Product availability. You don't want to interfere with retail dollars, but sometimes you might have problems fulfilling an order. For example, if a farmer also sells to a farmer's market and has a really good week there, they might not have the amount of produce requested for an order so we then have to look at sourcing it from another farmer.

9. **What are the main issues in dealing with buyers?**
   On time orders and payments. You sometimes have to stay on top of a buyer so the farmer gets paid. Another issue is that some buyers follow USDA HACCP (Hazard Analysis Critical Control Point) food safety standards, and this

means there are strict guidelines on how the food can be packaged. For example, you can't have a delivery of tomatoes in boxes marked bananas, so we have to make sure our products have the correct type of packaging.

10. What would be the required investment to start a new food hub at another city in Alabama today?

Depends on the area. Location, space, infrastructure, transportation, staff, insurance and types of buyers are all factors that determine the viability and longevity of a food hub. For example, to sell to grocery stores you have to have a specific type of insurance that can be quite costly for emerging groups.

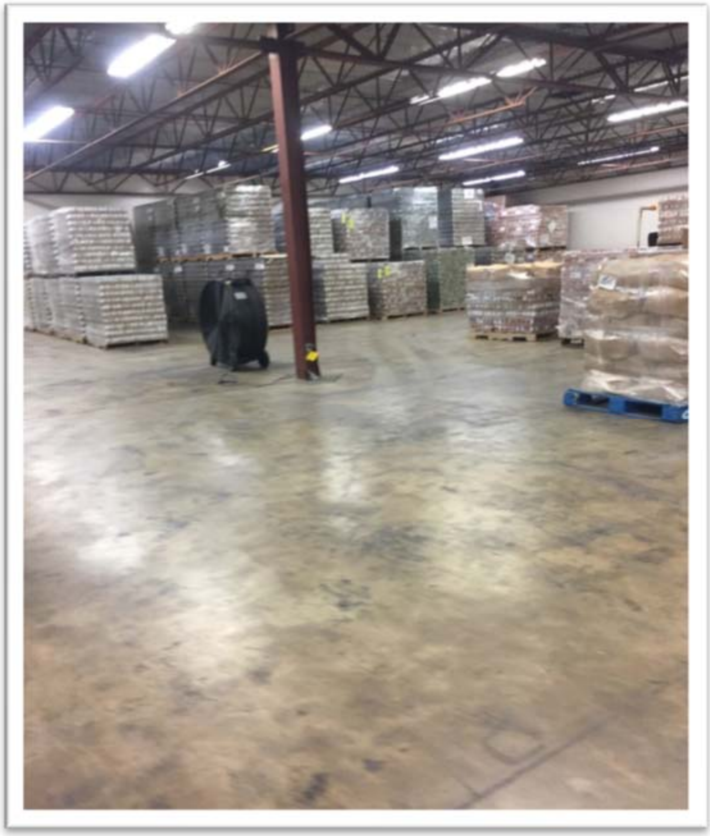
11. Is it possible to start a new food hub with limited services to buyers initially and add more services as the operation grows?

For us the focus is on serving farmers first and foremost. The best thing to do is ask farmers what they would like help with. And because each type of buyer will have specific requirements and product needs, we think it's best to start with one class of buyer before branching out.

12. Facility Observations

Limited size for the operation, the FFC office, located in the Food Bank, is shared among three people and the operation's refrigerated and equipment storage space is also shared with the Food Bank. The storage area consists of a warehouse style room for storage of dry goods and non-perishables, (Picture 1) and the facility contains a limited 1,400 square feet of cooler space and a smaller freezer. According to FFC staff, the Food Bank would need to be about the size of Birmingham's food bank in order to best serve all 11 counties in its territory, but it is roughly a third smaller. The FFC is generally allotted about a 10 square foot amount of cooler space (Picture 2) and is also given a small portion of space in the back-right portion of the warehouse for other storage. The FFC utilizes this space for an equipment library that the group loans out to farmers and for packaging. (Picture 3) This includes coolers, other equipment and RPCs (Reusable Plastic Containers) that are used by the farmers. FFC utilizes a refrigerated "Sprinter" style van (Picture 4) and a cargo van (not available for picture) that it shares with other Food Bank programs.

Picture 1: Food Bank Warehouse



Picture 2: FFC Cooler Storage

Picture 3: FFC Packaging Storage and RPC Baskets

Picture 4: FFC Refrigerated Van

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