

2013

## Final Report

Local Food Systems in Florida: Consumer  
Characteristics & Economic Impacts

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Center for Public Issues Education  
IN AGRICULTURE AND NATURAL RESOURCES

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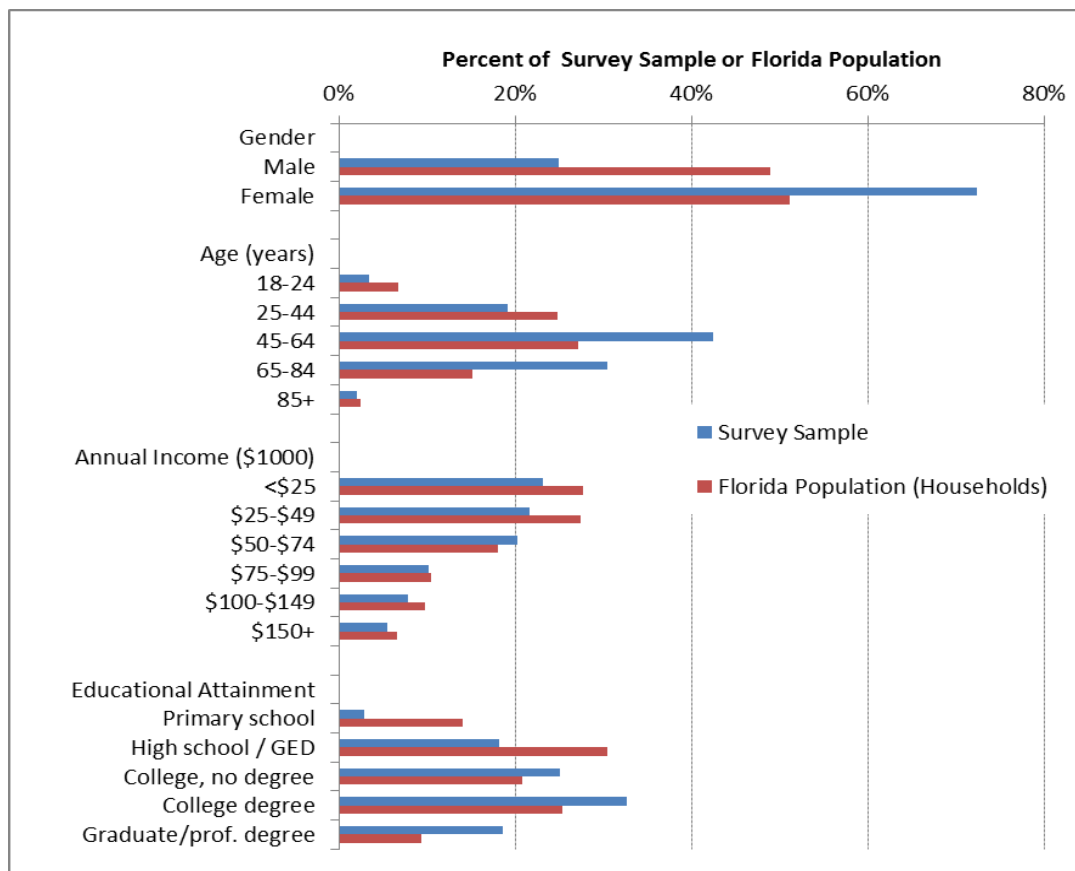
## Acknowledgements

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## Executive Summary

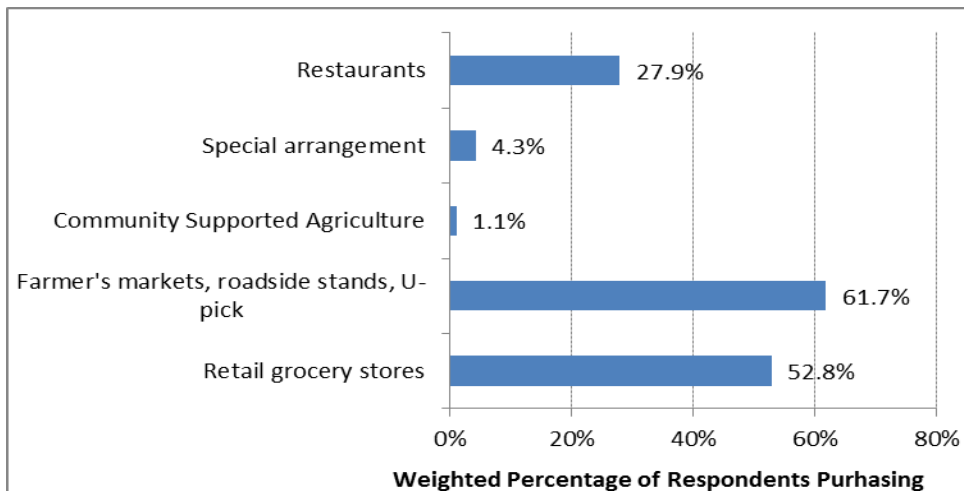
Direct and intermediated marketing of food products to local consumers in the United States has developed rapidly over the past 10 years, in response to concerns about food safety and quality, and local economic development, however, the characteristics of local food systems have not been widely studied. With support of a research grant, a public mail survey was conducted with a random sample of 7,500 households in the state of Florida to document local food purchasing patterns and economic impacts, and attitudes toward local foods. Usable survey responses were received from 1,599 respondents, representing a 21.4 percent response rate. Survey respondents were predominantly female, middle aged, middle income, and well educated compared to the overall Florida population (Figure ES1). Survey sample data were weighted based on location (county), age, education and income factors to account for differences in sampling intensity. The value of local food purchases reported by survey respondents was expanded to estimate the total annual value for all Florida households.

**Figure ES1. Summary of survey respondent demographic characteristics compared to the Florida population**



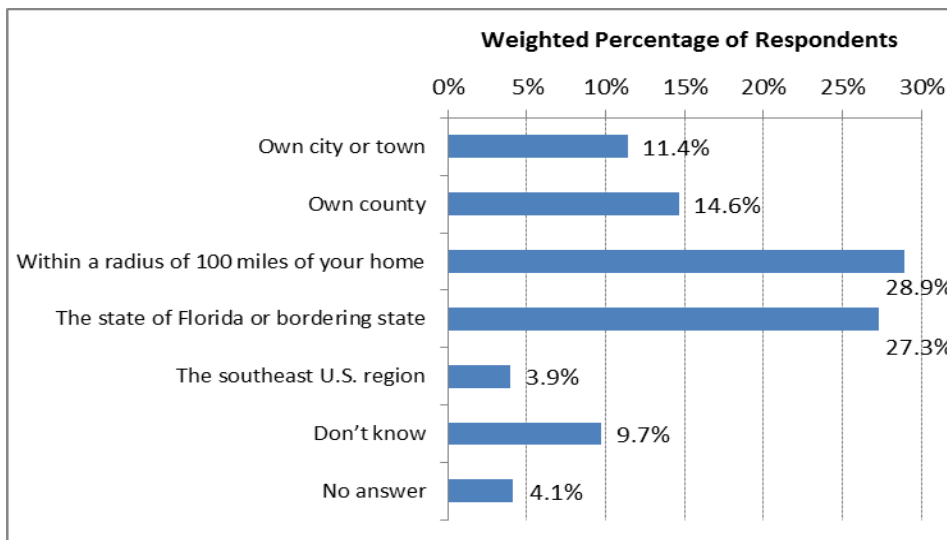
The weighted share of respondents who reported purchasing local food or through local market channels included 52.8 percent at retail grocery stores, 61.7 percent at farmer’s markets, roadside stands or self-harvest (“U-pick”) operations, 1.1 percent from Community Supported Agriculture (CSA) organizations, 4.3 percent purchasing directly from producers by special arrangement in advance, and 27.9 percent at restaurants or other food service establishments (Figure ES2). Respondents reported shopping at farmer’s markets or roadside stands on a weekly basis (10.6%), twice weekly (1.5%), every other week (8.3%), monthly (20.6%) or at other or irregular intervals (17.3%), and the remainder didn’t know or gave no answer (41.7%).

**Figure ES2. Summary of participation in local food marketing channels in Florida**



Although there is no standard accepted geographic definition of “local” foods, the most common definition reported by survey respondents was “within a radius of 100 miles of home”, chosen by 28.9 percent, although a substantial number chose the more expansive definitions of “within the state of Florida” (27.3%) or even with the southeast U.S. region (3.9%), while many chose the more restrictive definitions of “within my county” (14.6%) or “within my own city or town (11.4%)” (Figure ES3).

**Figure ES3. Area in which foods are considered to be “local” reported by survey respondents in Florida**

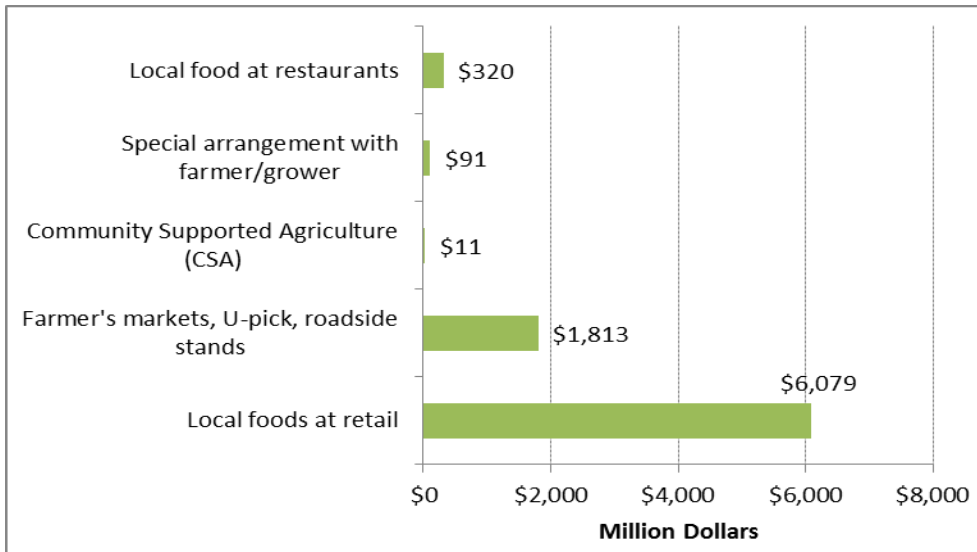


Values represent weighted percentages of survey respondents for largest area chosen.

The total value of all foods purchased annually in 2011-12 through local market channels in Florida was estimated at \$8.314 billion, including \$6.079 billion from grocery stores, \$1.813 billion from farmer’s markets, roadside stands and U-pick operations, \$320 million from restaurants and food services, \$91.2 million by special arrangement with producers, and \$11.4 million from CSA organizations (Figure ES4). The total value of local food purchases averaged \$1,114 per household annually. The total value of local foods purchased for at-home consumption through retail stores, farmer’s markets, roadside stands, U-pick, special arrangement, and CSAs but excluding restaurants, amounted to \$7.995 billion, and total direct-to-consumer purchases of local food (excluding restaurants and retail stores) were valued at \$1.916 billion. The total value of all foods purchased for at-home consumption, including non-local foods purchased at retail stores, was estimated at \$39.840 billion. Local foods represented 20.1 percent of total food purchases for at-home consumption, and 16.0 percent of total food purchases at retail stores. These values are much higher than has been reported in the literature, and suggest

that local food systems in Florida are better developed than most other areas of the United States, perhaps due to the favorable year-round growing conditions.

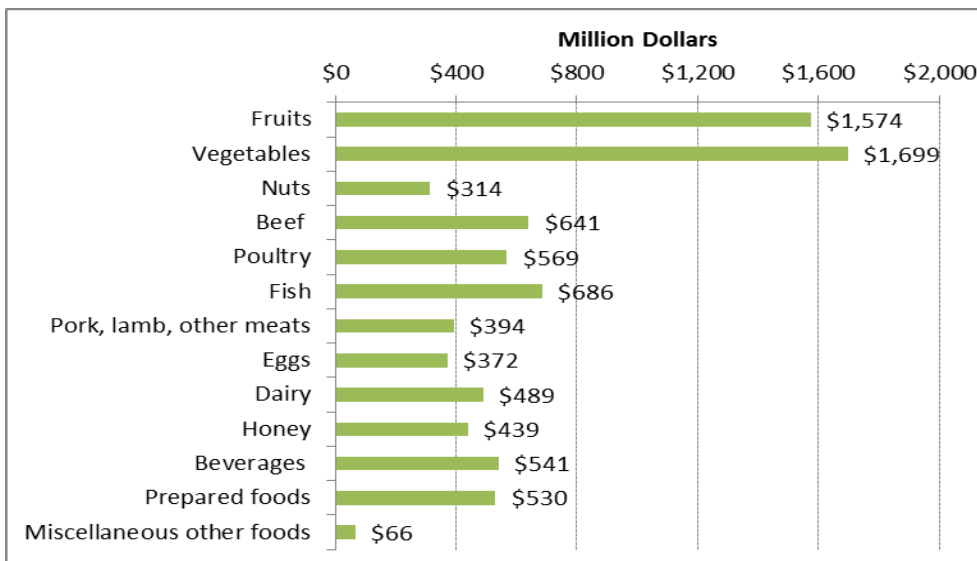
**Figure ES4. Summary of foods purchased through local market channels in Florida in 2011-12**



Values represent weighted and expanded purchases reported by survey respondents.

For local foods purchased from all sources in 2012, the largest food category was vegetables, valued at \$1.699 billion, representing 20.4 percent of the total, followed closely by fruits (\$1.574 billion, 18.9%), fish (\$686 million (M), 8.3%), beef (\$641M, 7.7%), poultry (\$569M, 6.8%), beverages such as juices, beer or wine (\$541M, 6.5%), prepared foods such as breads, pastries, jams or jellies (\$530M, 6.5%), dairy (\$489M, 5.9%), honey (\$439M, 5.3%), pork, lamb and other meats (\$393M, 4.7%), eggs (\$372M, 4.5%), nuts (\$315M, 3.8%), and other miscellaneous foods (\$66M, 0.8%) (Figure ES5).

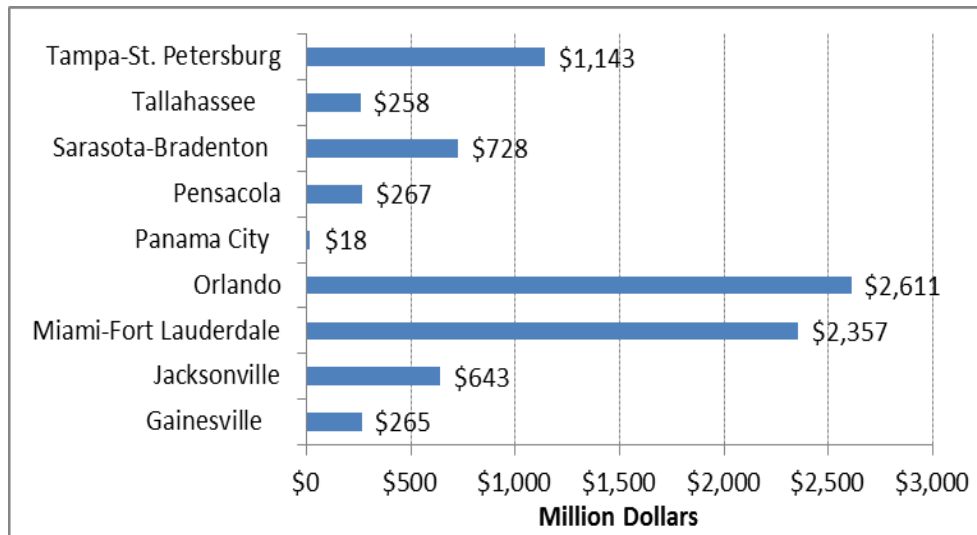
**Figure ES5. Summary of types of foods purchased through local market channels in Florida in 2011-12**





Regionally within the state of Florida, the largest value of local food purchases were in the major urban areas of Orlando (\$2.611 billion) and Miami-Ft. Lauderdale (\$2.357 billion), followed by Tampa-St. Petersburg (\$1.143 billion), Sarasota-Bradenton (\$728M), Jacksonville (\$643M), Pensacola (\$267M), Gainesville (\$265M), Tallahassee (\$258M) and Panama City (\$18M) (Figure ES6). The highest value of local foods purchased as a share of total food purchases for at-home consumption was in the Tallahassee area (36.2%), followed by Gainesville (26.4%), Orlando (21.8%) and Miami-Fort Lauderdale (20.8%).

**Figure ES6. Summary of local food purchases in Florida regions in 2011-12**



The total economic impacts of locally produced food purchases in Florida were estimated using a regional economic model (*IMPLAN*). The total value of local food purchases through direct-to-consumer market channels (farmer’s markets, roadside stands, U-pick, CSA and special arrangement with growers) were assigned directly to farm or food manufacturing producer sectors, while local foods purchased at retail stores were margined (split) between producers, retailers, wholesalers, and truck transportation firms, and, and purchases from restaurants were split between producers, food services, wholesalers, and transportation. The producer margins were considered as new final demand to the region, by displacement of competitive international and domestic imports, and therefore subject to direct, indirect and induced multiplier effects, however, the retailer and food service sector gross margins were treated as regional economic contributions subject only to direct multiplier effects. The total economic impacts of local food purchases in Florida for 2011-12 were estimated at 183,625 fulltime and part-time jobs, \$6.46 billion in labor income (employee wages, salaries and benefits), \$10.47 billion in value added contribution to Gross State Product, \$19.20 billion in industry output or revenues, and \$851 million in indirect business taxes to local, state and federal governments, expressed in 2013 dollars (Table ES1).

**Table ES1. Summary of total economic impacts of local food purchases in Florida in 2011-12**

Impact Type	Employment (Jobs)	Labor Income (M\$)	Value Added (M\$)	Output (M\$)	Indirect Business Taxes (M\$)
Producer Margin Direct Effect	55,656	\$1,182	\$2,270	\$5,511	\$14
-Indirect Effect	23,423	\$775	\$1,213	\$2,662	\$75
-Induced Effect	66,854	\$3,213	\$5,178	\$8,286	\$407
-Total Effect	<u>145,933</u>	<u>\$5,170</u>	<u>\$8,661</u>	<u>\$16,459</u>	<u>\$496</u>
Retailer Margin Direct Effect	34,045	\$1,189	\$1,672	\$2,496	\$338
Restaurant Margin Direct Effect	3,648	\$96	\$138	\$245	\$18
Total All Industries	<u>183,625</u>	<u>\$6,455</u>	<u>\$10,470</u>	<u>\$19,200</u>	<u>\$851</u>

Values in millions 2013 dollars, and employment in fulltime and part-time jobs.

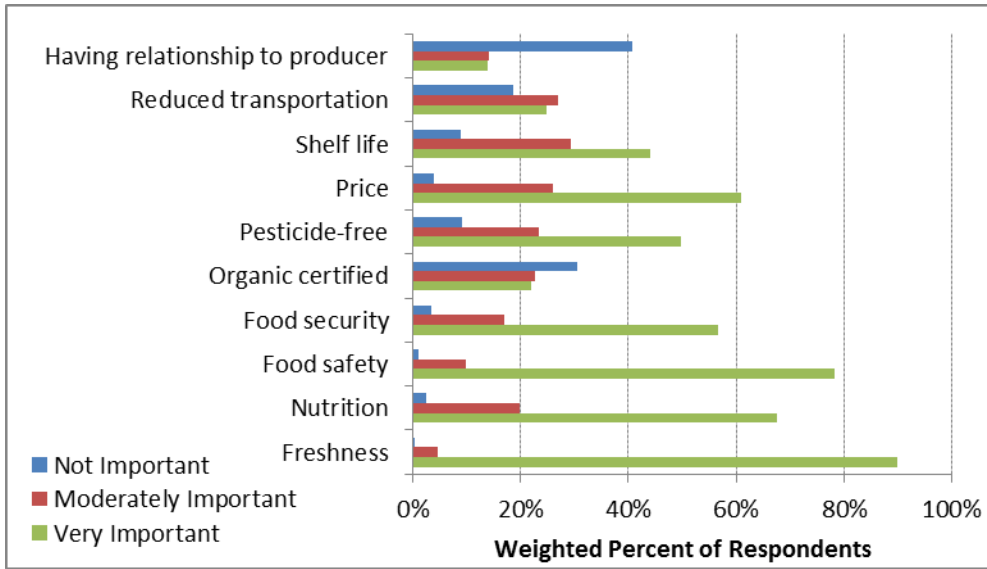
Estimates reflect total multiplier effects for producer margin, and direct effects only for retailer and restaurant margins.

The attributes of local food systems that were indicated by respondents as “very important” were “freshness” (90.1%), “food safety” (78.2%), and “nutrition (67.7%), followed by “price” (60.8%), “food security” (56.7%), “pesticide free (49.7%), “shelf life” (44.0%), “reduced transportation” (24.7%) and “having relationship to producer” (13.8%) (Figure ES7).

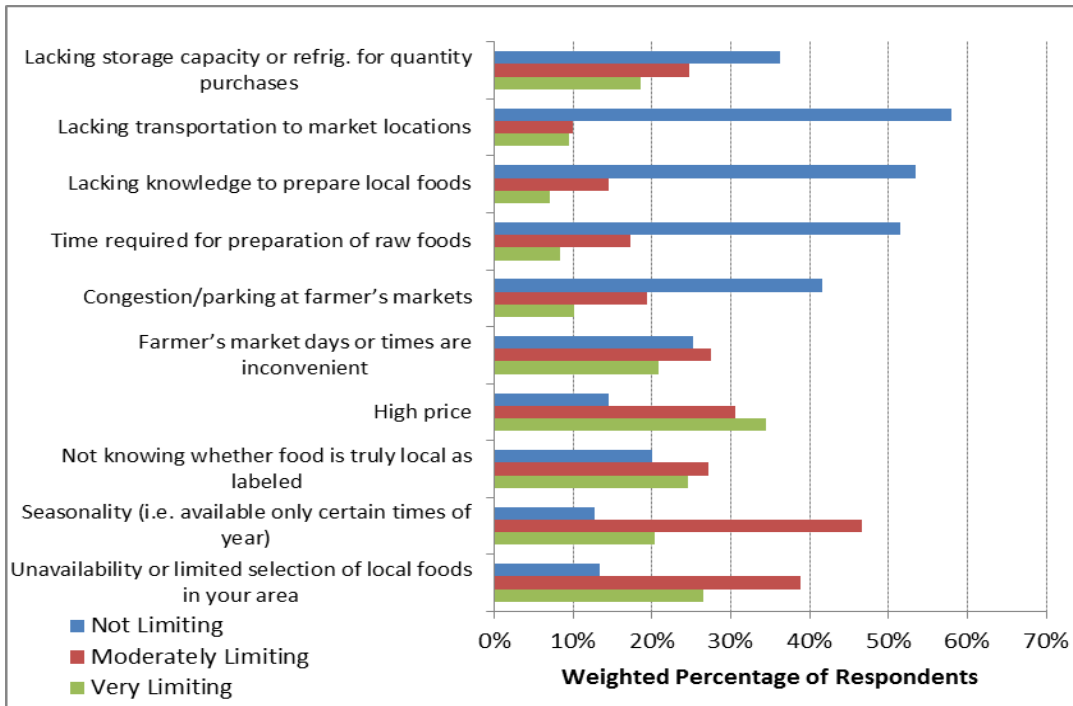
The factors that were regarded as potentially “very limiting” for local food systems by at least 20 percent of weighted respondents were “high price” (34.5%), “unavailability or limited selection of local foods in your area” (26.5%), “not knowing whether food is truly local as labeled” (24.5%), “farmer’s market days or times are inconvenient” (20.9%), and seasonal availability only certain times of year (20.3%) (Figure ES8).

Statistical analysis of the survey data revealed that several demographic variables were significantly related ( $p < 0.05$ , F test) to the total value of local food purchases, including respondent age, gender, household income, educational attainment, number of persons in the household, and the two factor interactions of age-household income, age-educational attainment, and household income-number of persons in household. Demographic factors that were not significant were Florida region, type of dwelling (single family vs. multifamily), and type of residential area (large city, small city, town, rural). In addition, respondent ratings of the importance of some attributes of local food were significant predictors of local food purchasing behavior, including “Pesticide free” and “Having a relationship to producers”, while the potentially limiting factors that were significant predictors of local food purchasing were “Unavailability or limited selection of local foods in your area”, “Not knowing if foods are truly local as labeled”, “High price”, and “Lacking transportation to market locations” (Figure ES9).

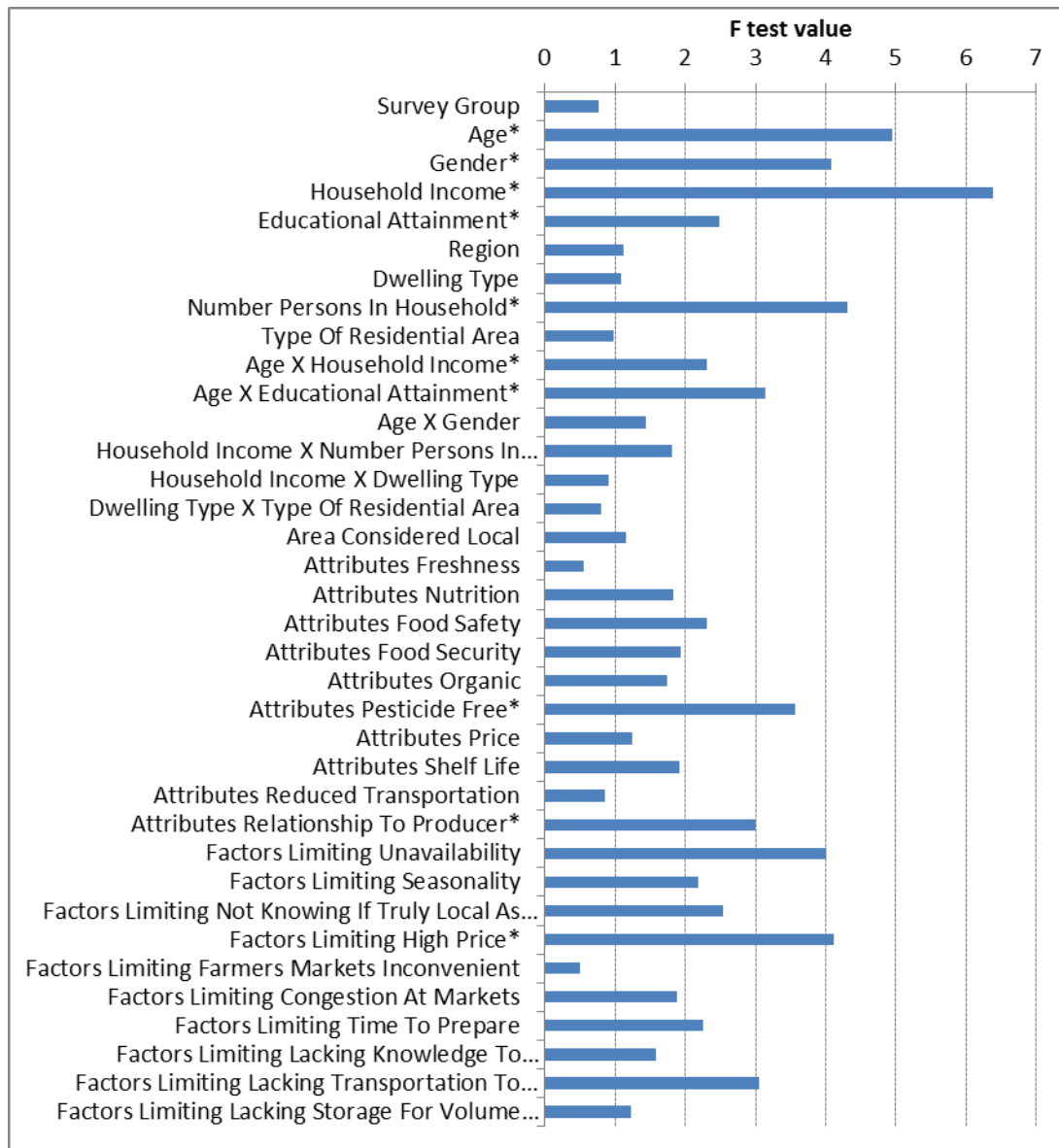
**Figure ES7. Summary of important attributes for local food systems in Florida**



**Figure ES8. Summary of factors limiting purchases of local foods in Florida**



**Figure ES9. Summary of regression model effects for annual purchases of local foods in Florida**

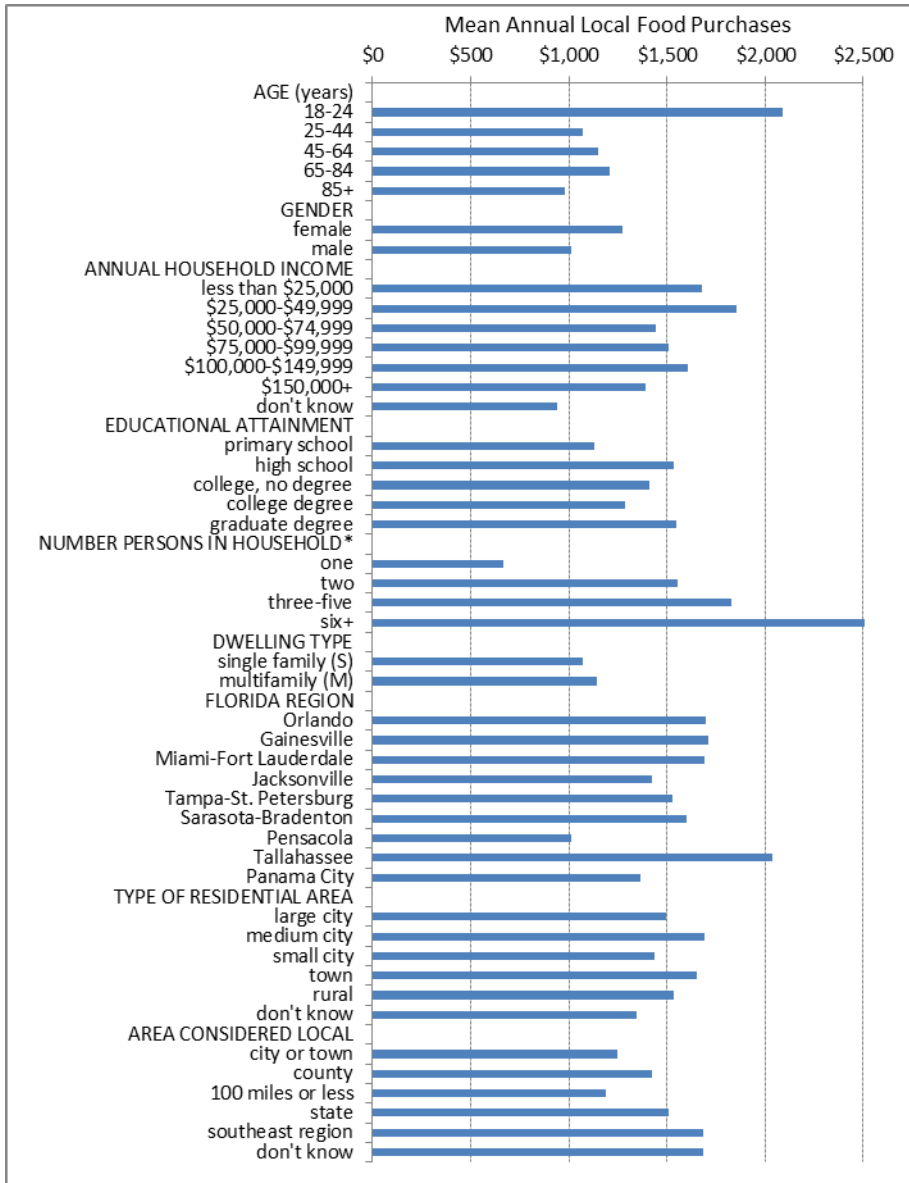


Statistically significant factors ( $p < 0.05$ , F test) in model are indicated by an asterisk.

Weighted average local food purchases per household are summarized in Figure ES10. Purchases were higher for respondents 18 to 24 years in age than for those aged 85 or over. Purchases were higher for females than for males, although not statistically significant. Local food purchases were also greater for households with two or three to five persons than for single-person households. Surprisingly, average local food purchases per household were not consistently related to annual household income or educational attainment, factors that have been identified in previous research. Although there were apparent differences in across levels of dwelling type, Florida region, and type of residential area, these differences were not statistically significant. Further research should examine local food purchases in relation to demographic factors and consumer attitudes.

Implications of the study findings for food policy are briefly discussed. Results for a special sample of survey respondents in a 10-county region of north-central Florida are provided in a companion report.

**Figure ES10. Summary of mean annual purchases of local foods in Florida by demographic factor level**



Variables with statistically significant differences ( $p < 0.05$ ) in mean values are indicated by an asterisk.

## Introduction

Demand for locally produced food is rapidly growing in the United States, due to concerns about sustainability, nutrition, food safety and security, farmland retention, and economic development (Figures 1 and 2). There is no standard definition of “local” food, but a commonly accepted definition is that it is produced within 100 miles of where it is consumed. Local food systems consist of a variety of direct-to-consumer market channels, including farmer’s markets, roadside stands, self-harvesting or “U-pick” operations, and Community Supported Agriculture (CSA) buying clubs. In addition, locally produced food may be distributed through traditional intermediated market channels such as regional food wholesalers, retail grocery stores, consumer-owned cooperatives, restaurants, and institutional food service establishments. Some potential benefits of local and direct food marketing that have been suggested include:

- Reduced marketing costs through less reliance on brokers, wholesalers and traditional retailers
- Enhanced sustainability: reduced transportation costs and carbon footprint
- Enhanced freshness and nutrition
- Reduced spoilage and increased shelf life
- Consumers may have relationship to producer
- Enhanced food safety/traceability/accountability
- Enhanced food security
- Supports local economic development, job creation, and business retention.

Based on the U.S. Department of Agriculture’s Agricultural Resource Management Survey in 2008 there were 107,200 farms in the United States engaged in direct-to-consumer or intermediated marketing of local food products with a value of \$4.8 billion that year (Low and Vogel, 2011). The authors concluded that one-half to two-thirds of these local-food sales occurred through intermediate channels. Earlier government data collection efforts on locally produced food sales focused primarily on direct farmer-to-consumer sales. Local and direct food marketing has experienced strong growth in the U.S. Direct-to-consumer sales have increased since 1992 (Figure 1). In 2007, direct-to-consumer food sales represented 0.4 percent of total agricultural product sales, and 0.21 percent of total at-home food consumption in the U.S. (Martinez et al., 2010). The number of farmer’s markets in the U.S. increased from less than 2,000 in 1994 to over 7,000 in 2011 (Figure 2). The number of farm-to-school food programs in the U.S. increased from only 2 in 1996 to over 2,000 in 2009 (National Farm to School Network). There were over 1,400 Community Supported Agriculture operations in the U.S. in 2010 (National Center for Appropriate Technology). The largest food commodities marketed directly to consumers were fruits and nuts (\$344 million), vegetables and melons (\$335 million), beef (\$141 million) and other animal products (\$236 million). Note that direct-to-consumer sales does not include intermediated sales to grocery stores, wholesalers, restaurants, etc.

Local food systems are more developed in some parts of the U.S., including New England, the upper Midwest, Mountain southwest and Pacific coast regions, however, they have been less developed in the southern U.S., in spite of favorable climatic conditions for year-round food production and significant production of fruits and vegetables (Figure 3). Direct-to-consumer sales in Florida in 2007 were reportedly valued at \$19.36 million (UDSA-NASS, U.S. Census of Agriculture).

In examining consumer participation and expenditures on local foods, there have been numerous intercept surveys of local food consumers at farmers markets over the years, but relatively few that randomly sampled local food purchasers from the general population. In the largest study of this nature, Smith and Sharp (2008)

conducted interviews with 1,500 randomly selected Ohio residents about their purchases of locally produced food during 2007. The survey was limited to consumers who had purchased local foods directly from farmers, not grocery stores that carried local foods. It was found that 96 percent of Ohio respondents had purchased locally grown foods during 2007, and 79 percent did so either occasionally or frequently. The median annual expenditures on local foods in this survey were \$68 per household.

DeSisto et al. (2009) conducted a telephone survey of 412 primary shoppers in Chittenden County, Vermont in the fall of 2007. For all possible venues, including grocery stores, wholesale clubs, big box stores, general stores, and farmers markets, 58.5 percent of respondents had purchased local foods within the last seven days, with over 60 percent of respondents making these purchases at grocery stores, while only six percent reported purchasing local foods at farmers markets. This result was likely due to the time of year when there are few farmers' markets in operation in Vermont. On average, respondents spent \$16 on local foods during the previous week, including those who did not purchase any local foods, which would be equivalent to \$64 monthly, or \$768 annually, if the week chosen was representative.

Conner et al. (2010) conducted a random statewide telephone survey in the fall of 2008 of 953 Michigan residents who purchased food for their households. Sixty-one percent of respondents had visited farmers markets in the last year, averaging four visits in the most recent month, and three-quarters of respondents purchased locally grown food in the last year. In a separate article by Ross et al. (2010), it was reported that 55 percent of respondents from the same survey had purchased local foods at farmer's markets during the previous month and that their expenditures averaged \$14.75.

A total of 703 primary household shoppers from nine counties in western North Carolina were interviewed by telephone in April of 2011 regarding their food purchase habits (TJH Research and Strategy, no date available). A majority of consumers (60%) reported purchasing locally grown food weekly when in season, and an additional 23 percent bought local food monthly. These included purchases made directly and indirectly from local producers. By multiplying the average reported monthly total expenditures on all food (\$339) by the reported share of monthly expenditures for local food (15.88%), the average expenditure for local food can be estimated at \$53.81 monthly or \$646 annually. A survey of 282 residents of Renville County Minnesota in 2011 by Pesch (2012) revealed that 40 percent of respondents had purchased local foods at farmers markets, 22 had purchased at roadside stands, and 18 purchased directly from a farm during the previous year. It is notable that 49 percent of Renville respondents had also obtained local food from a family or friend's garden, and another 28 percent from hunting and fishing. Median per person spending on local food at farmers markets and local farms was estimated at \$6.25 and \$2.57 per week, respectively, or \$325 and \$107 annually. The average household size of survey respondents was 2.31, so equivalent weekly amounts per household were \$14.44 and \$5.93 per week, respectively, or \$751 and \$308 annually. One caveat is that Renville cannot be considered typical because nearly 70 percent of respondents reported raising at least one type of food for their own consumption, although the amounts were small.

The economic impacts of local food systems have been assessed in a few studies. Local food production and marketing is generally more labor intensive than conventional large scale production and wholesale marketing. Fruit and vegetable farms with local food sales employed significantly more persons than farms without local food sales: 13 vs. 3 fulltime equivalent persons per million dollars sales, respectively (O'Hara, 2011). A study of 152 farmer's markets in Iowa showed that these markets generated increased employment of 576 jobs and \$17.8 million in personal income (Otto, 2010). A study of farmer's markets in West Virginia found that they generated an increase of \$1.1 million in gross output and 82 jobs, net of reductions in volume for traditional food retailers (Hughes et al, 2008). In a study of the potential impact of locally sourced fruit and vegetable production on farms

within 150 miles of large metropolitan areas in six Midwestern states, it was estimated that there would be a net increase of 4,802 jobs and \$710 million in gross output (Swenson, 2010).

Market research has demonstrated that consumers have a willingness to pay a premium price for local foods, similar to the premium for organic certified food. For example, one study showed a willingness to pay a premium of 50 percent for fresh produce in Florida (Figure 4).

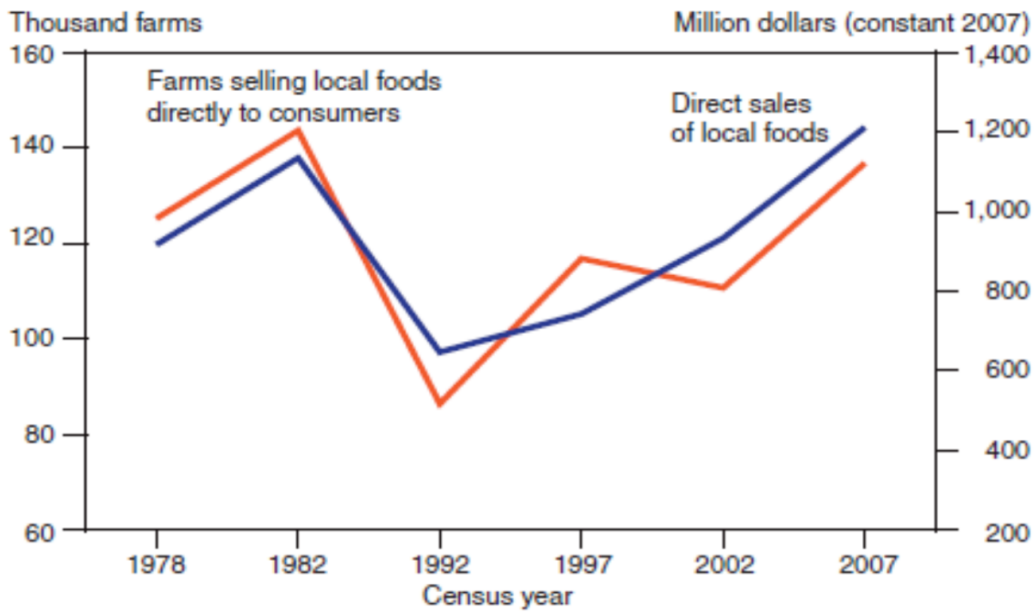
Further development of local food systems and direct food marketing faces a number of behavioral, institutional and economic constraints, both for consumers and producers, including:

- Unavailability or limited selection of foods
- Seasonality (i.e. some foods available only certain times of year)
- Higher costs for low volume production
- Inconvenience of market outlet times and locations
- Uncertainty of origin of food
- Lack of knowledge for preparation of raw foods
- Lack of storage capacity for large quantity purchases
- Access to capital
- Diseconomies of small scale operations
- Greater labor requirements
- Lack of market power for small producers
- Food safety regulations
- Time requirements for direct-to-consumer marketing
- Centralized purchasing for larger intermediary markets

Against this background, a public survey effort was undertaken to document consumption patterns, economic values, and attitudes towards locally produced food in the state of Florida, in order to support public policy to better promote development of local food systems.

**Figure 1. Number of farms selling local foods directly to consumers and value of sales, 1978-2007**

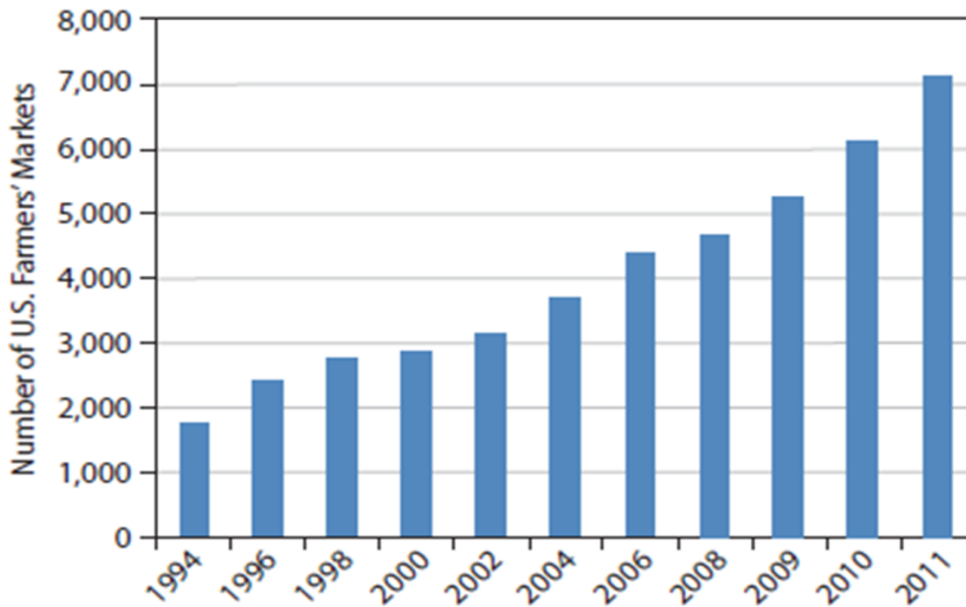




Note: Inflation adjusted sales were calculated based on the gross domestic product implicit price deflator published by the Bureau of Economic Analysis, U.S. Department of Commerce and calibrated to 2007=100.

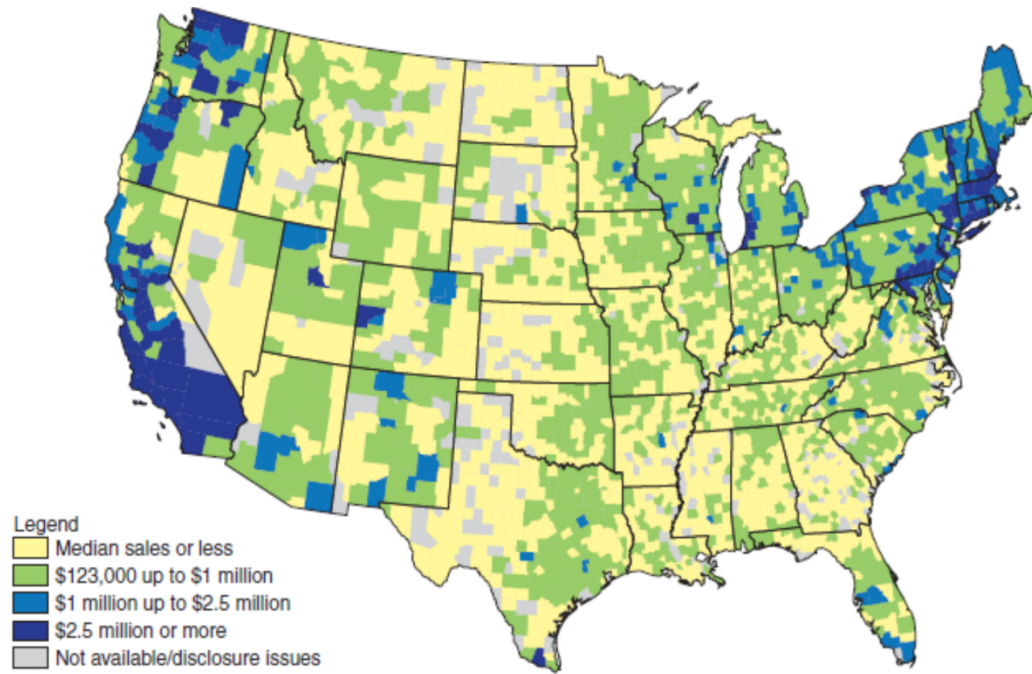
Source: 1978, 1982, 1992, 1997, 2002, and 2007 U.S. Censuses of Agriculture.

Figure 2. Number of farmer’s markets in the United States, 1994-2011



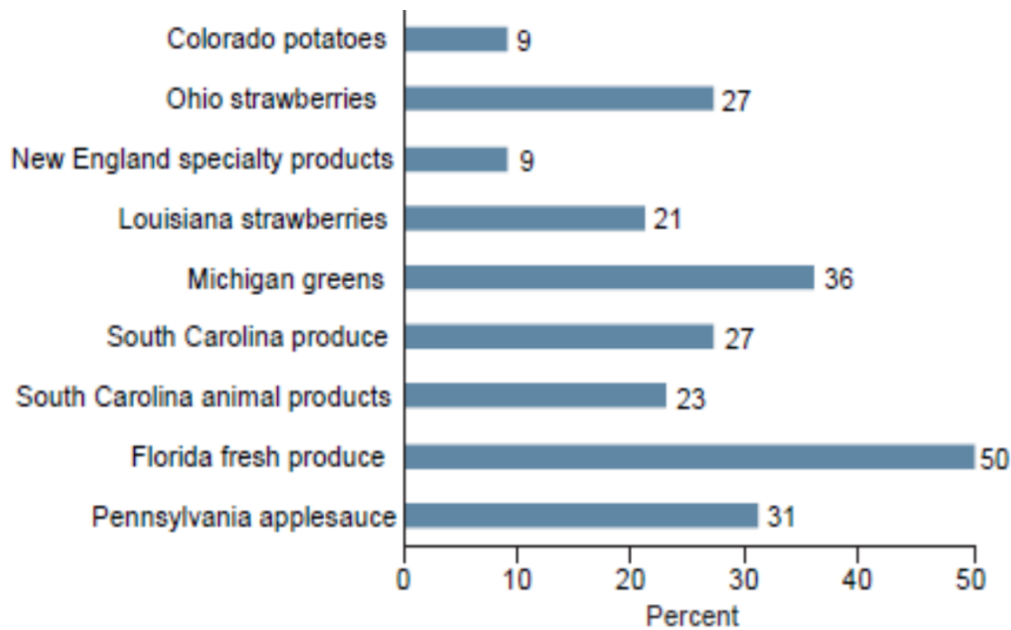
Source: USDA, <http://www.ams.usda.gov/AMSV1.0/>

**Figure 3. Value of direct-to-consumer food sales, by county, 2007**



Source: USDA, National Agricultural Statistics Service; 2007 Census of Agriculture.

**Figure 4. Consumer willingness to pay price premiums for local foods**



Source: USDA, Economic Research Service, compiled from various studies, reproduced from Martinez, et al (2010).

## Methods

### Survey Data Collection and Analysis

The content of the survey questionnaire was developed in consultation with University of Florida faculty and a local food advisory panel (see Acknowledgements). The survey sought to collect information on frequency of shopping and typical value of purchases of food at retail grocery stores, food purchased at groceries labeled as “local”, frequency and value of purchases at farmer’s markets, roadside stands and U-pick operations, purchases from growers by special arrangement (apart from pick-ups at regular markets), food received from Community Supported Agriculture (CSA) groups, and value of local foods purchased at restaurants or other food service establishments. Information of value of purchases was obtained for 13 food groups: fruits, vegetables, nuts, beef, poultry, fish, pork/lamb/other meats, eggs, dairy (milk, cheese, yoghurt), honey, beverages (juice, beer, wine), prepared foods (e.g. bread, jams, jellies, pastries, etc.), and miscellaneous other foods specified. In order to better understand the factors influencing local food purchasing behavior, the survey also gathered information on the geographic area understood by the term “local food”, perceived barriers to local food systems, and respondent demographic information (age, gender, educational attainment, household income, household size, type of residential area), as well as general open-ended comments about local food. A copy of the questionnaire is provided in Appendix B.

A survey mailing list was obtained from *Marketing Systems Group, Inc.* (Horsham, PA) for a random sample of 7,500 households throughout Florida. The sample included 2,500 households located in a 10-county area of North-central Florida (Alachua, Bradford, Clay, Columbia, Gilchrist, Levy, Marion, Putnam, Suwannee, Union), which was a special focus of the study for a stakeholder group in the region, and complete results for the north-central Florida area are provided in a companion report.

Two complete mailings of the survey questionnaire were mailed to the sample households during June-July, 2012, together with a cover letter explaining the purpose of the survey, and postage-paid return envelope. An introductory postcard was sent one week before the first mailing, and reminder postcards were sent one week after each survey mailing, in keeping with survey research best practices as recommended by Dillman (2007). Correspondence was addressed to the “resident”, and the survey instructions asked for the survey to be completed by “the person in the household most responsible for purchasing food” who is an adult (aged 18+ years). Survey questionnaires were imprinted with a code number matched to the address listing, in order to enable identification of survey respondents for purposes of quality control, and to provide information on the home location of the respondent. The survey questionnaire and protocol were approved by the University of Florida Institutional Review Board for compliance with ethical standards for research on human subjects.

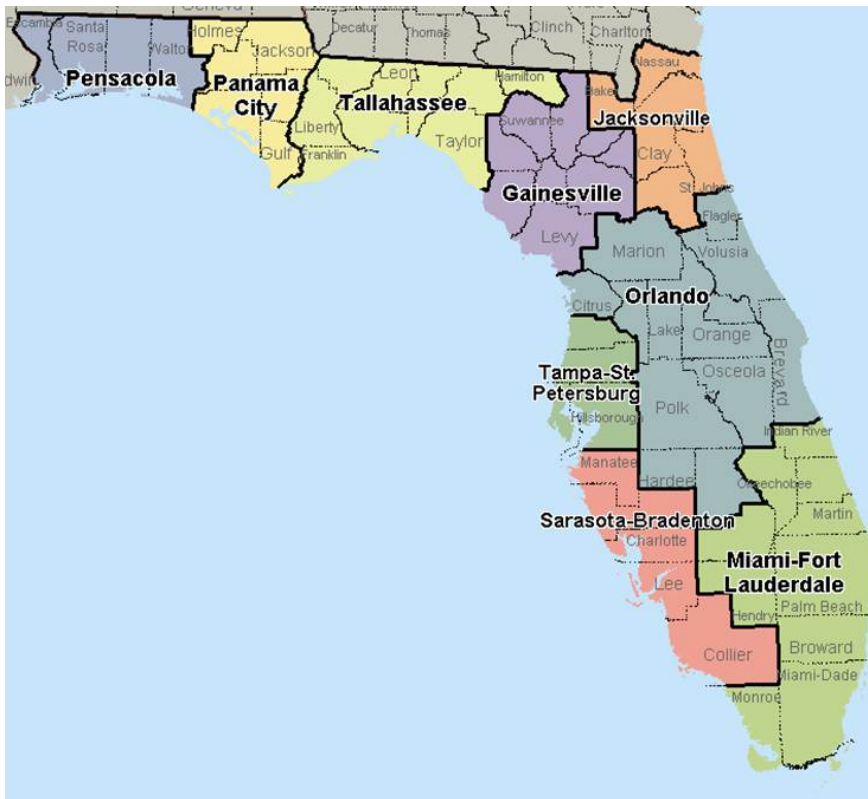
A total of 1731 questionnaires were returned for the survey, of which 1599 were usable after excluding duplicates received from the same household (Table 1). In cases where two surveys were returned from the same household, one was chosen to use for analysis which was most completely filled-out. After eliminating a small number (24) of addresses for which survey mailings were returned as undeliverable, the overall survey response rate was 21.4 percent. Survey results were analyzed separately for North-central Florida (NCF) and all Florida counties (AF). A small number of responses (5) could not be identified with either survey group because code numbers were removed or obliterated. The data were also analyzed for functional economic regions within the state consisting of core metropolitan areas and related surrounding counties, as mapped in Figure 5. Note that these regions do not correspond to the survey group areas. The number of observations, sampled households, response rates for Florida economic regions and counties are summarized in Tables 2 and 3. Response rates were highest in the Gainesville region (26.7%) and Orlando region (23.1%), and lowest in the Miami-Ft. Lauderdale region (16.4%). The response rates at the county level generally reflect those of their respective regions although the sample size for many individual counties is too small to be meaningful.

**Table 1. Florida local food consumption survey group sample numbers and response rates**

Survey Group	Number of Observations	Percent of Obs.	Number Sampled	Number Undeliverable by Mail	Response Rate	Number Households (2011)	Expansion Factor
North Central Florida Counties	621	39.0%	2,500	6	25.0%	413,537	663
Rest of Florida Counties	970	60.7%	5,000	15	19.5%	7,048,432	7266
Not available	5	0.3%					
Total All Florida Counties	<u>1,599</u>		<u>7,500</u>	<u>21</u>	21.4%	<u>7,461,969</u>	<u>4667</u>

North-Central Florida counties surveyed include Alachua, Bradford, Clay, Columbia, Gilchrist, Levy, Marion, Putnam, Suwannee, Union.

**Figure 5. Functional economic regions of Florida**



Adapted from U.S. Commerce Department, Bureau of Economic Analysis (Johnson and Kort, 2004).

**Table 2. Local food survey sample numbers and response rates in Florida economic regions**

Region	Number of Observations	Percent of Obs.	Number Sampled	Response Rate	Number Households (2010)
Gainesville	279	17.4%	1,044	26.7%	186,432
Jacksonville	194	12.1%	925	21.1%	555,511
Miami-Fort Lauderdale	276	17.3%	1,691	16.4%	2,405,954
Orlando	477	29.8%	2,071	23.1%	1,808,177
Panama City	15	0.9%	75	20.5%	112,875
Pensacola	40	2.5%	211	19.0%	269,648
Sarasota-Bradenton	119	7.4%	546	21.8%	795,575
Tallahassee	27	1.7%	128	21.1%	171,0394
Tampa-St. Petersburg	167	10.4%	809	20.7%	1,156,758
Not available	5	0.3%			
<b>Total/All Regions</b>	<b>1599</b>	<b>100%</b>	<b>7500</b>	<b>21.4%</b>	<b>7,461,969</b>

Source for number of households: Smith, S.K and S. Cody, Florida Population Studies, Vol. 45, Bulletin 161, University of Florida, Bureau of Economic and Business Research (UF-BEBR, 2012).

Survey data were entered into Excel worksheets for tabulation and analysis. The value of food purchased from different sources, either on a periodic basis or annually, was reported in ranges of values, and the midpoint of the range was assigned as a point estimate of the value for purposes of quantitative analysis (e.g. amounts reported in range “\$15 to \$29” were assigned value of \$22.50). Respondents who reported purchases in the largest range were also requested to provide a specific estimate of the value. The frequency of shopping trips for retail stores and farmer’s markets was converted to express as an annual number of shopping trips, and this number was

multiplied by the reported amount spent on a typical trip to estimate the total annual value of purchases. Excessively large outlier values for estimated total value of purchases were excluded from the final data analysis.

The aggregate annual value of local foods purchased by all households in Florida was estimated based on values reported in the survey together with expansion factors that represent the ratio of the number of sampled households to the total household population, and demographic weighting factors. Florida had a total of 7.46 million households in 2011 (UF-BEBR).

**Table 3. Local food survey sample numbers and response rates in Florida counties**

County	Number of Observations	Percent of Observations	Number Sampled	Response Rate	Number Households (2011)
Alachua	179	11.28%	597	30.0%	100,565
Baker	1	0.06%	6	16.7%	8,727
Bay	11	0.69%	52	21.2%	68,608
Bradford	11	0.69%	57	19.3%	9,472
Brevard	32	2.02%	171	18.7%	230,492
Broward	87	5.48%	491	17.7%	688,073
Charlotte	10	0.63%	42	23.8%	73,814
Citrus	8	0.50%	42	19.0%	63,181
Clay	80	5.04%	421	19.0%	68,892
Collier	12	0.76%	86	14.0%	134,123
Columbia	36	2.27%	149	24.2%	24,907
DeSoto	4	0.25%	7	57.1%	11,416
Dixie	1	0.06%	4	25.0%	6,308
Duval	49	3.09%	258	19.0%	343,346
Escambia	16	1.01%	94	17.0%	116,840
Flagler	3	0.19%	20	15.0%	39,409
Franklin	1	0.06%	3	33.3%	4,260
Gadsden	2	0.13%	9	22.2%	17,255
Gilchrist	7	0.44%	35	20.0%	6,135
Hardee	1	0.06%	4	25.0%	8,223
Hendry	2	0.13%	4	50.0%	12,016
Hernando	14	0.88%	51	27.5%	71,864
Highlands	6	0.38%	25	24.0%	42,572
Hillsborough	59	3.72%	348	17.0%	477,759
Indian River	11	0.69%	38	28.9%	60,474
Jackson	1	0.06%	9	11.1%	17,641
Lake	18	1.13%	98	18.4%	121,872
Lee	36	2.27%	187	19.3%	262,581
Leon	18	1.13%	85	21.2%	111,256
Levy	16	1.01%	87	18.4%	16,393
Liberty	1	0.06%	5	20.0%	2,550
Madison	2	0.13%	5	40.0%	6,987
Manatee	23	1.45%	103	22.3%	137,028
Marion	225	14.18%	871	25.8%	137,949
Martin	11	0.69%	38	28.9%	64,082
Miami-Dade	67	4.22%	637	10.5%	874,586
Monroe	8	0.50%	25	32.0%	32,562
Nassau	4	0.25%	19	21.1%	28,938
Okaloosa	11	0.69%	58	19.0%	72,792
Okeechobee	1	0.06%	7	14.3%	13,974
Orange	56	3.53%	300	18.7%	426,328
Osceola	12	0.76%	62	19.4%	92,353
Palm Beach	70	4.41%	372	18.8%	546,408
Pasco	37	2.33%	143	25.9%	190,364
Pinellas	55	3.47%	267	20.6%	416,771
Polk	33	2.08%	169	19.5%	228,483
Putnam	39	2.46%	168	23.2%	29,162
Santa Rosa	10	0.63%	44	22.7%	57,549
Sarasota	34	2.14%	121	28.1%	176,613
Seminole	30	1.89%	113	26.5%	165,440
St. Johns	19	1.20%	53	35.8%	76,446
St. Lucie	16	1.01%	79	20.3%	109,273
Sumter	7	0.44%	29	24.1%	43,245
Suwannee	23	1.45%	91	25.3%	16,014
Taylor	1	0.06%	8	12.5%	7,906
Union	5	0.32%	24	20.8%	4,048
Volusia	44	2.77%	167	26.3%	208,630
Wakulla	2	0.13%	6	33.3%	10,538
Walton	3	0.19%	15	20.0%	22,467
Washington	2	0.13%	4	50.0%	8,885
Not Available	4	0.25%	17	23.5%	35,124
<b>Total All Counties</b>	<b>1,587</b>	<b>100.00%</b>	<b>7,500</b>	<b>21.16%</b>	<b>7,461,969</b>

Source for Florida household numbers: University of Florida, Bureau of Economic and Business Research (UF-BEBR, 2012).

Demographic characteristics of the survey respondents are shown in the Table 4. Over 72 percent of respondents were female, and 73 percent were between the ages of 45 and 84. About 45 percent of respondents had annual household income level less than \$50,000, and 30 percent of respondents had household incomes of \$50,000 to \$99,000. The overall weighted average household size was 2.41 persons, with about 44 percent of respondents living in two-person households, while 24 percent were one-person households and 28 percent were households with three to five persons. In terms of education, survey respondents, on average, had more years of schooling than the State's population as a whole. Over half (51%) of respondents had a college or graduate/professional degree, another 25 percent had attended college but did not obtain a degree, and only 21 percent had primary school or high school education. Some 42 percent of respondents lived in medium- or large-sized cities (over 100,000 population), while 37 percent lived in small cities or towns, and 13 percent resided in rural or unincorporated areas. Nearly 82 percent of respondents lived in single family dwellings, and 17 lived in multifamily dwellings. The demographic weighting factors shown in Table 4 were combined with the survey group expansion factors in Table 1 to provide an overall sample weight for each respondent observation.

Multiple linear regression analysis of the survey data was carried out using the Statistical Analysis System software *SurveyReg* procedure, with demographic and geographic weighting factors applied and using the "missing" option to retain observations with missing values (SAS Institute, 2011). The estimated value of total retail food purchases and total purchases of local foods through each respective market channel were modeled as dependent variables in relation to all demographic and attribute factors (independent categorical variables), and certain two-factor interactions. Tests of statistical significance were applied to determine those factors having an effect on purchasing behavior at a 95 percent or higher level of confidence, i.e. the probability of making a false inference was less than 5 percent. Differences in mean values of dependent variables for each level of the independent variables were tested using the *Least Squares Means* statement and the *Tukey-Kramer* multiple comparison procedure.



**Table 4. Demographic characteristics of survey respondents compared to the Florida population, and sample weighting factors**

Characteristic	Survey Sample Number and Percentage		Florida Population (2012)	Sample Weighting Factor
<b>Gender</b>				
Male	396	25.0%	48.9%	
Female	1145	72.4%	51.1%	
No answer	40	2.5%		
<b>Age (years)</b>				
18 to 24	53	3.4%	6.7%	1.9618
25 to 44	305	19.3%	24.9%	1.2584
45 to 64	669	42.3%	27.1%	0.6262
65 to 84	484	30.6%	15.2%	0.4851
85 or greater	33	2.1%	2.4%	1.1328
No answer	37	2.3%		1.0000
<b>Household income last year</b>				
Less than \$25,000	367	23.2%	27.7%	1.0576
\$25,000 to \$49,999	344	21.7%	27.4%	1.1135
\$50,000 to \$74,999	320	20.2%	18.1%	0.7904
\$75,000 to \$99,000	160	10.1%	10.5%	0.9194
\$100,000 to \$149,000	122	7.7%	9.7%	1.1141
\$150,000 or more	87	5.5%	6.6%	1.0674
Don't know	52	3.3%		1.0000
No answer	131	8.3%		1.0000
<b>Number of persons in household last year</b>				
One	373	23.6%		
Two	694	43.8%		
Three to Five	443	28.0%		
Six or more	32	2.0%		
No answer	41	2.6%		
<b>Educational attainment</b>				
Primary school (through 9 <sup>th</sup> grade)	44	2.8%	14.1%	4.8960
High school diploma or GED	289	18.4%	30.4%	1.6093
Some college, no degree	397	25.3%	20.8%	0.8021
College degree (associate's or bachelor's)	514	32.7%	25.4%	0.7554
Graduate/professional degree	286	18.2%	9.3%	0.4994
No answer	42	2.7%		1.0000
<b>Type of area of residence (population)</b>				
Large city (500,000+)	202	12.8%		
Medium city (100,000 to 499,999)	459	29.0%		
Small city (10,000 to 99,999)	421	26.6%		
Town (1,000 to 9,999)	163	10.3%		
Rural/unincorporated area	210	13.3%		
Don't know	78	4.9%		
No answer	48	3.0%		
<b>Household dwelling Type</b>				
Single family	1296	81.9%		
Multi family	269	17.0%		
Other	18	1.1%		

Source for Florida population information: U.S. Census Bureau, American Community Survey.

## Economic Impact Analysis

Total economic impacts of local food consumption in Florida were estimated using a regional economic model created with the *IMPLAN* software and state data (version 3, MIG, Inc.). This system enables construction of input-output models and social accounting matrices that represent the structure of a regional economy in terms of transactions among 440 industry sectors, in addition to households, and governments. The *IMPLAN* model includes accounts for industrial commodity production, employment, labor and property income, household and institutional consumption, domestic and international trade (imports, exports), government taxes, transfer payments such as welfare and retirement, and capital investment. The model can be used to estimate economic multipliers for each industry in the State, which can then be used to calculate their secondary (indirect and induced) effects. Local food purchases were considered to represent new final demand, since they displace foods that would otherwise be imported from outside the state. Indirect effects multipliers represent the economic activity generated in the supply chain through the purchase of intermediate inputs from vendors, while induced effects multipliers represent the impacts of spending by industry employee and proprietor households and governments (Miller and Blair, 2009). The total economic impacts of local food purchases are calculated as the sum of the direct, indirect, and induced effects.

The *IMPLAN* model was constructed using the “trade flows” option in the software, which takes advantage of commodity flows information from the 2007 Economic Census and a gravity model to estimate the share of commodities purchased from local sources. The model included all social/institutional accounts for households, local, state, and federal governments, and capital investment internally (treated as endogenous). Multipliers used in the analysis are shown in Table 5. The multipliers represent total dollars generated per dollar of final demand (spending), or jobs generated per million dollars. Measures of economic impacts reported here include output or revenue, value added, employment (full-time, part-time, and seasonal positions), labor income (employee and business owner wages and benefits), and indirect business taxes paid to local, state, and federal governments. Value added is a broad measure of net economic activity that is comparable to the Gross Domestic Product (GDP), and represents the sum of labor and other property income, indirect business taxes, and capital consumption (depreciation). Value added also is equivalent to the difference between industry revenues and intermediate inputs purchased from other sectors.

**Table 5. Regional economic multipliers for selected agricultural and food industries in the state of Florida in 2011**

Food Commodity/Service Group	IMPLAN Industry Sector Number and Description	Output Dollars per Dollar Final Demand	Value Added	Labor Income	Indirect Business Taxes (Spending)	Employment Jobs per Million Dollars Spending
Vegetables	3. Vegetable and melon farming	3.154	1.864	1.134	0.098	25.328
Fruits	4. Fruit farming	3.175	1.888	1.175	0.090	27.349
Nuts	5. Tree nut farming	3.180	1.936	1.223	0.093	33.366
Other foods	10. All other crop farming	2.889	1.416	0.870	0.069	22.505
Beef	11. Cattle ranching and farming	3.151	1.217	0.688	0.057	25.913
Dairy	12. Dairy cattle and milk production	2.814	1.371	0.677	0.072	21.909
Poultry, Eggs	13. Poultry and egg production	2.582	0.992	0.617	0.060	12.814
Other meats (pork, etc.), Honey	14. Animal production, except cattle and poultry and eggs	2.795	1.565	0.849	0.068	43.221
Fish	17. Commercial Fishing	2.384	1.229	0.714	0.079	46.924
Prepared foods	69. All other food manufacturing	2.754	1.261	0.768	0.078	15.325
Beverages (split 3-ways)	54. Fruit and vegetable canning, pickling, and drying	2.892	1.351	0.842	0.084	18.416
	71. Breweries	2.827	1.566	0.810	0.330	15.539
	72. Wineries	2.817	1.355	0.848	0.162	17.592
Wholesale distribution	319. Wholesale trade businesses	3.452	2.283	1.395	0.271	26.643
Retail grocery sales	324. Retail Stores - Food and beverage	3.587	2.330	1.528	0.273	39.975
Transportation	335. Transport by truck	3.050	1.666	1.126	0.103	26.077
Restaurant sales	413. Food services and drinking places	3.285	1.993	1.271	0.183	35.772

Total multipliers equal the sum of the direct, indirect, and induced effects multipliers.  
 Employment multipliers represent fulltime and part-time jobs per million dollars final demand.  
 Source: IMPLAN (MIG, Inc., 2012).

To estimate the economic impacts of local food purchases through direct-to-consumer market channels (farmer’s markets, roadside stands, U-pick, CSA and special arrangement with growers), values were assigned to the appropriate farm producer or food manufacturing industry (IMPLAN sectors 3 through 71), and multiplied by the numbers shown in Table 5. The value of local foods purchased at retail stores was margined (split) between producers, wholesalers, transportation, and retail stores, as shown in Table 6. Retail margins are estimated by the U.S. Bureau of Economic Analysis and included in the IMPLAN software for the industries of interest in this study. Margins for restaurant sales of local foods were estimated from the IMPLAN restaurant industry production function (sector number 413) to split local food purchases from restaurants between producers (25%), wholesalers (5%), truck transportation (5%), and food services (65%). Producer activity was considered as new final demand to the region, by displacement of competitive international and domestic imports, and therefore subject to direct, indirect and induced multiplier effects. In contrast, the retailer and food service sector gross margins were treated as regional economic contributions subject only to direct multiplier effects (Watson *et al*, 2007).

**Table 6. Marketing margins for local food sales by retail grocery stores**

<i>IMPLAN</i> Commodity Sector Name	Sector Number	Production	Wholesale Distribution Services	Retail Food & Beverage Stores	Transportation
Vegetables & Melons	3003	46.06%	16.64%	27.01%	10.29%
Fruits	3004	49.98%	16.79%	26.94%	6.29%
Tree nuts	3005	62.94%	4.35%	26.93%	5.77%
All other crop farming products	3010	60.82%	3.93%	29.15%	6.11%
Cattle from Ranches*	3011	66.83%	5.77%	25.50%	1.90%
Dairy Cattle*	3012	67.35%	4.61%	26.90%	1.14%
Poultry & Eggs	3013	67.40%	1.59%	26.94%	4.07%
Animal Products Except Cattle & Poultry	3014	72.22%	0.19%	25.96%	1.62%
Fish	3017	63.37%	7.43%	26.98%	2.22%
Canned, pickled & dried fruits & vegetables	3054	62.47%	8.94%	26.96%	1.62%
Fluid Milk	3055	67.33%	4.61%	26.92%	1.14%
Processed animal (except poultry) meat	3059	66.85%	5.77%	25.47%	1.90%
All other manufactured food products	3069	62.77%	9.18%	26.65%	1.41%
Beer, ale, malt liquor and nonalcoholic beer	3071	50.21%	26.27%	21.67%	1.85%
Wine and Brandies	3072	54.29%	23.63%	20.64%	1.45%

\*Margins were not available for these production sectors, so margins for Fluid Milk production and Animal Slaughter were used instead.

## Results

### Food Purchasing Patterns

Summary findings of the participation rates and frequency that survey respondents purchase from various local food marketing outlets are presented in Table 7. Statewide, 52.8 percent of respondents reported that they purchased local foods at retail grocery stores, while 17.2 percent did not, and 30.0 percent did not know or didn't answer this question. Some 61.7 percent of respondents reported that they purchased local foods at farmer's markets, roadside stands or U-pick operations, and 34.0 percent said they did not. The share of survey respondents who belonged to a Community Supported Agriculture (CSA) group was only 1.1. The percentage of respondents who reported purchasing food from local producers by special arrangement, i.e. in advance and aside from purchases made at farmer's markets or other direct farm-to-consumer outlets, was 4.3 percent overall. The share of respondents who reported purchasing local food items at restaurants or other food service establishments was 27.9 percent, while 43.5 percent did not and 28.6 percent did not know (Table 6).

**Table 7. Summary of survey respondent participation in local food marketing channels in Florida**

Market Channel	Participated	Did Not Participate	Don't know or No Answer
	Weighted Percentage of Respondents		
Retail grocery stores	52.8%	17.2%	30.0%
Farmer's markets, roadside stands, U-pick	61.7%	34.0%	4.3%
Community Supported Agriculture	1.1%	89.6%	9.3%
Special arrangement	4.3%	87.4%	8.4%
Restaurants	27.9%	43.5%	28.6%

Results represent weighted percentages of respondents using sample weighting factors.

The frequency that survey respondents reported purchasing from various local food marketing outlets is presented in Table 8. For shopping at grocery stores or other retail food markets, the most common reported frequency was “weekly” (39.4%), followed by “twice weekly” (29.6%) and “every other week” (14.5%), with smaller percentages of respondents reporting shopping “monthly”(7.3%), “daily” (5.0%), or at other or irregular intervals (5.4%), and 1.9 percent didn’t know or did not answer the question (Table 8). Among respondents who purchased from farmer’s markets, roadside stands or U-pick locations, 20.6 percent purchased monthly, 10.6 percent purchased weekly, 8.3 percent purchased biweekly (every other week), and 17.3 percent purchased at irregular or unspecified intervals (Table 8). Numerous respondents commented that they shop at farmer’s markets or other direct farm-to-consumer outlets for produce that is seasonally available. The frequency of receiving food from a CSA was about equally distributed at weekly, biweekly or monthly intervals (Table 8).

**Table 8. Frequency of survey respondent shopping or receiving foods through market channels in Florida**

Market Channel / Shopping Frequency	Number Observations	Weighted Percentage
<b>Grocery stores or other retail markets</b>		
Daily	72	5.0%
Twice weekly	472	26.6%
Weekly	633	39.4%
Every other week	202	14.5%
Monthly	85	7.3%
Irregular or other interval	102	5.4%
Don't know	3	0.1%
No answer	25	1.7%
Total	1594	100%
<b>Farmer's markets, roadside stands or U-pick operations</b>		
Daily	2	0.2%
Twice weekly	21	1.5%
Weekly	202	10.6%
Every other week	152	8.3%
Monthly	328	20.6%
Irregular or other interval	342	17.3%
Don't know	51	3.5%
No answer	493	38.2%
Total	1591	0.2%
<b>Community Supported Agriculture</b>		
Weekly	4	0.1%
Biweekly	6	0.3%
Monthly	6	0.6%
Don't know	2	0.3%
No answer	1574	98.7%
Total	1592	100%

Results for weighted percentages of respondents reflect sample weighting factors.

Survey results on the types of foods respondents purchased through different local food market channels for north-central Florida and the state as a whole are summarized in Table 9. Fruits and vegetables were the most common type of food purchased for all local food outlets, both statewide and in the north-central Florida region, with the exception of restaurants where meats were more common. Over 50 percent of consumers indicated they purchased fruits and vegetables at both retail stores and farmers markets statewide. Over 60 percent of respondents in north-central Florida purchased fruits and vegetables at farmers markets, and some respondents noted that they preferred to purchase fruits and vegetables at farmer's markets and roadside stands rather than at grocery stores. Some respondents noted that they purchased seafood products from a local fish market or originating from a specific locale, e.g. Key West shrimp. Grocery stores were unique in that besides fruits and vegetables, all food types except miscellaneous "other" were purchased by at least 19 percent of respondents. The share of respondents who purchased foods besides fruits and vegetables through other outlets was in the single digits, except for restaurants. The types of foods most commonly received from CSAs were vegetables, fruits, dairy and eggs, with small numbers receiving meats/fish, honey, beverages or prepared foods. The foods most commonly purchased from producers by special arrangement were fruits and vegetables, pork, lamb and other meats, fish and dairy. The types of local foods most commonly purchased at restaurants were fruits and

vegetables, and meats (beef, poultry, fish, pork, lamb, other) in about equal share, followed by prepared foods such as baked goods, jams, jellies, and beverages (juice, beer, wine). Respondents commented that they patronize restaurants serving foods made with local ingredients, or establishments that advertise supporting local farmers. Several respondents noted that they commonly purchased local condiments such as spices, salsa, peanut butter, olive oil and sauces, bread or baked goods, or other prepared foods such as cereal, soups and chips.

**Table 9. Summary of types of foods purchased through local food market channels in Florida**

Market Channel / Food Type	Number respondents	Weighted percentage
<b>Local foods at retail stores</b>		
Fruits	837	51.1%
Vegetables	846	51.5%
Nuts	259	18.8%
Beef	296	23.4%
Poultry	320	23.6%
Fish	337	24.2%
Pork, lamb, other meats	247	20.3%
Eggs	423	29.7%
Dairy	409	28.2%
Honey	332	19.9%
Beverages	336	24.2%
Prepared foods	420	27.9%
Other	41	2.8%
<b>Farmer's markets, roadside stands and U-pick operations</b>		
Fruits	1,016	57.9%
Vegetables	1,028	58.1%
Nuts	157	7.8%
Beef	42	2.7%
Poultry	46	2.6%
Fish	98	4.9%
Pork, lamb, other meats	42	2.6%
Eggs	160	8.2%
Dairy	108	6.7%
Honey	324	17.4%
Beverages	71	4.5%
Prepared foods	279	15.8%
Other	26	1.5%
<b>Community Supported Agriculture (CSA)</b>		
Fruits	12	21.9%
Vegetables	16	28.1%
Meats or fish	5	8.5%
Eggs	3	6.7%
Dairy	6	9.2%
Honey	9	13.2%
Beverages	3	5.5%
Prepared foods	4	6.8%
<b>Purchased directly from local producers by special arrangement</b>		
Fruits	46	15.9%
Vegetables	53	18.1%

Market Channel / Food Type	Number respondents	Weighted percentage
Nuts	12	4.0%
Beef	14	7.0%
Poultry	13	6.1%
Fish	15	10.9%
Pork, lamb, other meats	31	11.6%
Eggs	10	3.3%
Dairy (milk, cheese, yogurt)	21	10.8%
Honey	14	6.4%
Prepared foods	10	4.4%
Beverages (juice, beer, wine)	3	1.5%
<b>Restaurants or other food service establishments</b>		
Fruits and Vegetables	254	23.2%
Meats (beef, poultry, fish, pork, lamb, other)	253	25.6%
Eggs	86	8.2%
Dairy (milk, cheese, yogurt)	90	9.4%
Beverages (juice, beer, wine)	119	13.8%
Prepared foods (baked goods, jams, jellies)	186	19.8%

The dollar amounts that respondents reported typically spending for food of all types on shopping trips to grocery stores are presented in Table 10. The most commonly reported amount was “\$50 to \$99” reported by 29.6 percent of respondents, followed by the “\$100 to \$149” category (26.8%) and “less than \$50” (17.3%). Nearly three-fourths (73.7%) of respondents spent less than \$150 dollars on a typical visit to a grocery store.

**Table 10. Amount typically spent for food on shopping trips to grocery stores in Florida**

Amount	Number Observations	Weighted Percentage
Less than \$50	275	17.3%
\$50 to \$99	537	29.6%
\$100 to \$149	430	26.8%
\$150 to \$199	138	9.8%
\$200 to \$299	118	9.9%
\$300 to \$399	23	1.3%
\$400 or more	30	1.9%
Don't know	9	1.5%
No answer	31	1.9%
Total	1594	100%

Survey results on the types of foods purchased at grocery stores and farmers markets in Florida are presented in Table 11. For grocery stores, the most common spending levels for most food groups were “zero”, “less than \$5” or “\$5 to \$14”, each reported by a double digit percentages of respondents. For fruits and vegetables over one quarter of respondents spent \$5 to \$14, while over ten percent spent this amount for beef, poultry, fish, dairy, beverages and prepared foods at on typical trips to retail grocery stores. For purchases at farmers markets, roadside stand and U-pick operations, fruits and vegetables were by far the most commonly purchased items, with over 30 percent of respondents spending \$5 to \$14 and over 16 percent spending less than \$5. Also, 7.6 percent of respondents spent \$5 to \$14 for honey, and 6.9 percent spent this amount for prepared foods at farmer’s markets. In general, significantly less meats and animal products were purchased at farmer’s markets.



**Table 11. Value of local food purchases, by food type on typical shopping trips to retail grocery stores and farmer’s markets in Florida**

Market Channel / Food Type	Zero	Less than \$5	\$5 to \$14	\$15 to \$29	\$30 or more	Don't know	No answer
Weighted Percentage of Respondents							
<b>Retail Grocery Stores</b>							
Fruits	2.8%	16.6%	27.6%	5.7%	1.3%	1.4%	44.7%
Vegetables	2.5%	15.5%	27.3%	6.3%	2.5%	1.4%	44.5%
Nuts	17.5%	11.4%	5.9%	0.6%	0.8%	2.9%	60.8%
Beef	12.2%	2.7%	10.7%	6.4%	3.6%	3.4%	61.0%
Poultry	12.3%	4.1%	11.4%	4.7%	3.4%	3.3%	60.8%
Fish	12.0%	5.0%	12.8%	5.0%	1.4%	2.9%	60.9%
Pork, lamb, other meats	14.2%	6.7%	8.5%	3.9%	1.2%	3.7%	61.9%
Eggs	10.0%	20.0%	8.5%	0.9%	0.2%	2.7%	57.6%
Dairy	9.9%	10.4%	14.8%	2.7%	0.2%	2.8%	59.1%
Honey	17.2%	11.2%	7.9%	0.5%	0.3%	2.7%	60.2%
Beverages	13.9%	6.5%	12.8%	2.7%	2.2%	3.1%	58.8%
Prepared foods	11.5%	13.4%	12.2%	2.2%	0.2%	2.6%	58.1%
Other	6.6%	0.6%	1.5%	0.6%	0.1%	1.2%	89.4%
<b>Farmer’s Markets, Roadside Stands, U-Pick</b>							
Fruits	0.5%	19.3%	32.2%	4.7%	1.7%	0.2%	41.4%
Vegetables	0.9%	16.9%	33.5%	6.3%	1.3%	0.3%	40.8%
Nuts	21.2%	4.1%	3.3%	0.3%	0.1%	1.0%	70.0%
Beef	23.9%	0.6%	0.8%	0.9%	0.5%	1.0%	72.3%
Poultry	24.1%	0.5%	1.0%	0.6%	0.5%	1.0%	72.3%
Fish	23.0%	0.7%	2.5%	0.9%	0.8%	0.9%	71.3%
Pork, lamb, other meats	23.7%	0.7%	1.2%	0.4%	0.2%	1.0%	72.7%
Eggs	20.6%	5.8%	2.2%	0.1%	0.1%	0.8%	70.5%
Dairy	21.5%	3.3%	3.2%	0.1%	0.1%	1.1%	70.7%
Honey	15.7%	9.0%	7.6%	0.7%	0.2%	0.7%	66.2%
Beverages	22.4%	1.7%	2.1%	0.6%	0.1%	1.1%	72.0%
Prepared foods	16.1%	8.3%	6.9%	0.5%	0.1%	1.2%	66.9%
Other foods	8.7%	0.6%	0.5%	0.3%	0.1%	0.8%	89.0%

Amounts spent annually for food purchases by special arrangements with local growers were reported by 3.2 percent of weighted respondents statewide (Table 12). Purchase levels by special arrangement ranged from less than \$100 to over \$500, but over half (57%) of these respondents spent less than \$100. Amounts spent on local foods at restaurants were reported by around 24 percent of respondents, and of these, 11.8 percent reported spending less than \$100 in the past year, while 7.5 percent spent \$200 or more (Table 12).

The annual subscriber fee reported for the CSA averaged \$160, and the average amount spent for regular user fees or periodic additional purchases was \$57.

**Table 12. Amount spent by survey respondents for foods purchased directly from local producers by special arrangement and foods consumed at restaurants during the past year**

Amount	Special Arrangement		Restaurants	
	Number Observations	Weighted Percentage	Number Observations	Weighted Percentage
Less than \$100	49	2.0%	163	11.8%
\$100 to \$199	16	0.4%	66	4.7%
\$200 to \$499	17	0.6%	92	6.5%
\$500 or more	3	0.2%	11	1.0%
Don't know	6	0.3%	55	2.9%
No answer	1495	96.5%	1193	72.9%
Total	<u>1586</u>	<u>100%</u>	<u>1580</u>	<u>100%</u>

Results for weighted percentages of respondents reflect sample weighting factors.

The average total amounts spent per household for local foods reported by survey respondents are summarized in Table 13. The total amount averaged \$1,114 per household, including \$815 for local foods at retail stores, \$243 at farmer's markets, roadside stands and U-pick operations, \$43 at restaurants, \$12 by special arrangement with farmers/growers, and \$1.5 from Community Supported Agriculture organizations. Purchases of all foods at retail stores reported by survey respondents, regardless of origin, averaged \$5,082.

**Table 13. Summary of average annual spending per household for local foods reported by survey respondents in Florida**

Local Food Market Channel	Average Value Per Household
Local foods at retail	\$815
Farmer's markets, roadside stands, U-pick	\$243
Community Supported Agriculture (CSA)	\$1.5
Special arrangement with farmer/grower	\$12.2
Local food at restaurants	\$42.8
Total	<u>\$1,114</u>

Results reflect sample weighting factors.

### Annual Value of Food Purchases

The annual values of food purchases by survey respondents were estimated based on information reported on frequency of shopping and amount spent on a typical trip for purchases at retail groceries or farmer's markets and other direct outlets, and annual values reported for CSAs, purchase by special arrangement, and at restaurants. These values were extrapolated to represent all households in the state of Florida using the survey sample expansion factors, as described in the methods section. The total value of all local foods purchased was estimated at \$8.314 billion, including \$6.079 billion from retail grocery stores, \$1.813 billion from farmer's markets, roadside stands and U-pick operations, \$320 million from restaurants and other food service establishments, \$91 million by special arrangement with farmers/growers, and \$11 million from CSAs (Table 14). Purchases of local foods for at-home consumption (excluding restaurants) amounted to \$7.995 billion, and purchases through direct-to-consumer market channels (i.e. excluding retail stores and restaurants) were valued

at \$1.916 billion. The total value of all foods purchased for at-home consumption, including both local and non-local foods purchased at retail stores, was estimated at \$39.840 billion. Local foods represented 20.1 percent of total food purchases for at-home consumption, and 16.1 percent of food purchases at retail stores.

**Table 14. Expanded value of annual food purchases through local market channels in Florida in 2011-12**

Food Market Channel / Category	Million dollars
Local foods at retail	\$6,078.6
Farmer's markets, U-pick, roadside stands	\$1,813.3
Community Supported Agriculture (CSA)	\$11.4
Special arrangement with farmer/grower	\$91.2
Local food at restaurants/food services	\$319.5
Total all local food market channels	\$8,314.0
Total local food purchases for at-home consumption (excluding foods consumed at restaurants)	\$7,994.5
Total direct-to-consumer purchases of local foods (excluding retail and restaurants)	\$1,915.9
Total all food (local & nonlocal) purchases for at-home consumption (total retail plus direct-to-consumer sales)	\$39,839.5
Percent local food purchases at retail	16.0%
Percent local all food purchases for at-home consumption	20.1%

Estimates based on survey results and weighting factors (see methods).

The value of annual food purchases of various food commodity groups reported by survey respondents within each market channel were also expanded to estimate their total value of local food purchases for the Florida population, as shown in Table 15. For local foods purchased through all market channels (bottom of table), the largest food category was vegetables at \$1.699 billion, representing 20.4 percent of the total, followed by fruits (\$1.574 billion, 19.0%), fish (\$686 million, 8.3%), beef (\$641 million, 7.7%), poultry (\$569 million, 6.8%), beverages (\$541 million, 6.5%), prepared foods (\$530 million, 6.5%), dairy products (\$489 million, 5.9%), honey (\$439 million, 5.3%), pork, lamb and other meats (\$394 million, 4.7%), eggs (\$372 million, 4.5%), nuts (\$315 million, 3.8%), and other miscellaneous foods (\$66 million, 0.8%).

For local foods purchased from retail grocery stores, the largest food category was vegetables (17.4%), followed by fruits (16.4%), beef (9.4%), fish (9.2%), poultry (8.1%), and beverages (7.6%) (Table 15). For foods purchased at farmer's markets and other direct market outlets, the largest food groups were also vegetables (32.3%) and fruits (28.9%), followed distantly by honey (7.9%), prepared foods (5.7%), and fish (5.2%). Among foods purchased from growers/ranchers by special arrangement, the largest food groups were again vegetables (18.1%) and fruits (15.9%), but then next were eggs (11.6%), fish (10.9%) and honey (10.8%). The largest food groups for CSAs were vegetables (28.1%) and fruits (21.9%), then dairy (13.2%), eggs (9.2%). For restaurants and food service establishments, the largest local food groups were all meats combined (beef, poultry, fish, pork, lamb, other; 25.6%), fruits and vegetables combined (23.2%), prepared foods (19.8%), beverages (13.8%), and dairy (9.4%).

**Table 15. Weighted and expanded value of annual local food purchases in Florida in 2011-12, by market channel and food type**

Market Channel / Food Type	Value (Million \$)	Percent
<b>Retail Grocery Stores</b>		
Fruits	\$996.0	16.4%
Vegetables	\$1,056.8	17.4%
Nuts	\$245.5	4.0%
Beef	\$573.1	9.4%
Poultry	\$492.5	8.1%
Fish	\$561.2	9.2%
Pork, lamb, other meats	\$338.2	5.6%
Eggs	\$267.6	4.4%
Dairy	\$394.0	6.5%
Honey	\$284.6	4.7%
Beverages	\$459.4	7.6%
Prepared foods	\$358.8	5.9%
Other	\$50.9	0.8%
Total All Food Types	<u>\$6,078.6</u>	<u>100%</u>
<b>Farmer's Markets, Roadside Stands, U-Pick</b>		
Fruits	\$523.8	28.9%
Vegetables	\$585.2	32.3%
Nuts	\$65.3	3.6%
Beef	\$40.9	2.3%
Poultry	\$49.9	2.8%
Fish	\$94.5	5.2%
Pork, lamb, other meats	\$31.6	1.7%
Eggs	\$66.4	3.7%
Dairy	\$57.9	3.2%
Honey	\$144.1	7.9%
Beverages	\$35.7	2.0%
Prepared foods	\$103.3	5.7%
Other	\$14.8	0.8%
Total All Food Types	<u>\$1,813.3</u>	<u>100%</u>
<b>By Special Arrangement with Producer</b>		
Fruits	\$14.5	15.9%
Vegetables	\$16.5	18.1%
Nuts	\$3.7	4.0%
Beef	\$6.4	7.0%
Poultry	\$5.6	6.1%
Fish	\$9.9	10.9%
Eggs	\$10.5	11.6%
Pork, lamb, other meats	\$3.1	3.3%
Honey	\$9.8	10.8%
Dairy (milk, cheese, yogurt)	\$5.9	6.4%
Prepared foods	\$4.0	4.4%
Beverages (juice, beer, wine)	\$1.4	1.5%
Total All Food Types	<u>\$91.2</u>	<u>100%</u>
<b>Community Supported Agriculture</b>		
Fruits	\$2.5	21.9%
Vegetables	\$3.2	28.1%
Meats or fish	\$1.0	8.5%
Honey	\$0.8	6.7%
Eggs	\$1.1	9.2%

Market Channel / Food Type	Value (Million \$)	Percent
Dairy	\$1.5	13.2%
Beverages	\$0.6	5.5%
Prepared foods	\$0.8	6.8%
Total All Food Types	<u>\$11.4</u>	100%
<b>Restaurants / Food Service</b>		
Fruits and Vegetables	\$74.1	23.2%
Meats (beef, poultry, fish, pork, lamb, other)	\$81.9	25.6%
Eggs	\$26.1	8.2%
Dairy (milk, cheese, yogurt)	\$29.9	9.4%
Beverages (juice, beer, wine)	\$44.2	13.8%
Prepared foods (baked goods, jams, jellies)	\$63.3	19.8%
Total All Food Types	<u>\$319.5</u>	100%
<b>All Local Market Channels</b>		
Fruits	\$1,573.8	18.9%
Vegetables	\$1,698.7	20.4%
Nuts	\$314.5	3.8%
Beef	\$641.0	7.7%
Poultry	\$568.8	6.8%
Fish	\$686.3	8.3%
Pork, lamb, other meats	\$393.6	4.7%
Eggs	\$371.7	4.5%
Dairy	\$489.1	5.9%
Honey	\$439.2	5.3%
Beverages	\$541.3	6.5%
Prepared foods	\$530.2	6.4%
Miscellaneous other foods	\$65.7	0.8%
Total All Food Types	<u>\$8,314.0</u>	100%

Value of meats (beef, poultry, fish, pork, other) split evenly for CSAs and restaurants.  
Estimates based on survey results and weighting factors.

Regionally within the state of Florida, the largest value of local food purchases was in the major urban areas of Orlando (\$2.611 billion), and Miami-Ft. Lauderdale (\$2.357 billion), followed by Tampa-St. Petersburg (\$1.143 billion), Sarasota-Bradenton (\$728 million), Jacksonville (\$643 million), Pensacola (\$267 million), Gainesville (\$265 million), Tallahassee (\$258 million) and Panama City (\$18 million), as shown in Table 16. The regions with the highest share of local food purchased for at-home consumption (excluding restaurants) was Tallahassee (36.2%), followed by Gainesville (26.4%), Orlando (21.8%), and Sarasota-Bradenton (18.9%), and for all other regions was at least 16 percent, except Panama City (2.3%).

**Table 16. Weighted and expanded estimates of annual local food purchases by market channel and Florida region in 2011-12**

Florida Region	Retail stores	Farmer's markets	Community Supported Agriculture	Special arrangement	Restaurants	Total All Local Food Channels	Percent local all food purchases for at-home consumption
----- Million Dollars -----							
Gainesville	\$205.9	\$47.7	\$0.33	\$2.00	\$9.1	\$265.0	26.4%
Jacksonville	\$448.6	\$157.6	\$4.89	\$2.71	\$29.1	\$643.0	16.9%
Miami-Fort Lauderdale	\$1,690.7	\$486.0	\$1.34	\$66.86	\$126.5	\$2,357.4	20.8%
Orlando	\$1,937.6	\$592.4	\$0.09	\$11.62	\$70.1	\$2,610.6	21.8%
Panama City	\$7.4	\$9.3	\$0.00	\$0.00	\$1.6	\$18.3	2.3%
Pensacola	\$183.8	\$64.7	\$0.00	\$3.72	\$14.9	\$267.2	17.7%
Sarasota-Bradenton	\$524.0	\$181.0	\$0.00	\$2.33	\$22.5	\$728.0	18.9%
Tallahassee	\$179.7	\$66.9	\$0.68	\$0.72	\$10.2	\$258.3	36.2%
Tampa-St. Petersburg	\$897.2	\$204.9	\$4.04	\$1.10	\$35.3	\$1,142.6	18.0%
Not available	\$3.6	\$2.8	\$0.00	\$0.17	\$0.1	\$6.6	11.2%
Total All Regions	<u>\$6,078.6</u>	<u>\$1,813.3</u>	<u>\$11.38</u>	<u>\$91.22</u>	<u>\$319.5</u>	<u>\$8,297.0</u>	20.1%

### Economic Impacts of Local Food Production

The total economic impacts of local food purchases were evaluated using a regional economic model, as described in the Methods section. The total expended value of purchases of each food commodity or service group were assigned to specific industry sectors (Table 17). The total value of local food purchases through direct-to-consumer market channels (farmer's markets, roadside stands, U-pick, CSA and special arrangement with growers) were assigned directly to farm producer industry sectors. The value of local foods purchased at retail stores was margined (split) between producers, wholesalers, transportation and retailers as shown in Table 6. Purchases from restaurants were split between producers (25%), wholesalers (5%), transportation (5%) and food services (65%). Note again that the producer margins were considered as new final demand to the region (by displacement of comparable international and domestic imports) and therefore subject to direct, indirect and induced multiplier effects, however, the retailer and food service sector gross margins were treated as regional economic contributions subject only to direct multiplier effects.

**Table 17. Value of annual local food purchases in Florida in 2011-12, by industry sector**

Market Level	Commodity / Service	Code	Value (Million Dollars)
Producers	Vegetables & Melons	3003	\$1,100.89
	Fruits	3004	\$1,047.87
	Tree nuts	3005	\$223.50
	All other crop farming products	3010	\$45.78
	Cattle from Ranches	3011	\$435.59
	Dairy Cattle	3012	\$338.06
	Poultry & Eggs	3013	\$657.74
	Animal Products Except Cattle & Poultry	3014	\$644.44
	Fish	3017	\$465.40
	Canned, pickled & dried fruits & vegetables	3054	\$111.90
	All other manufactured food products	3069	\$349.10
	Beer, ale, malt liquor and nonalcoholic beer	3071	\$93.13
	Wine and Brandies	3072	\$99.38
	Total		<u>\$5,612.79</u>
Retailers	Wholesale trade businesses	3319	\$584.99
	Retail Stores - Food and beverage	3324	\$1,606.39
	Transport by truck	3335	\$270.12
	Total		<u>\$2,461.51</u>
Food services	Wholesale trade businesses	3319	\$15.98
	Transport by truck	3335	\$15.98
	Food services and drinking places	3413	\$207.68
	Total		<u>\$239.63</u>
Total All Industries			<u>\$8,313.93</u>

The total economic impacts of local food purchases through all market channels included 183,625 fulltime and part-time jobs, \$6.46 billion in labor income, \$10.47 billion in value added contribution to Gross State product, \$19.20 billion in industry output or revenues, and \$851 million in indirect business taxes to local, state and federal governments, expressed in 2013 dollars (Table 18). These estimates reflect the direct, indirect and induced regional multiplier effects of local food production to meet consumer demand. The total impacts from producers, including direct, indirect and induced effects, were 145,933 jobs and \$8.66 billion in value added. The direct impacts of retailer margins were 34,045 jobs and \$1.67 billion in value added, and the direct impacts of restaurant gross margins was 3,648 jobs and \$138 million in value added.

**Table 18. Summary of total economic impacts of annual local food purchases in Florida in 2011-12**

Impact Type	Employment (Jobs)	Labor Income (M\$)	Value Added (M\$)	Output (M\$)	Indirect Business Taxes (M\$)
Producer Margin Direct Effect	55,656	\$1,182	\$2,270	\$5,511	\$14
-Indirect Effect	23,423	\$775	\$1,213	\$2,662	\$75
-Induced Effect	66,854	\$3,213	\$5,178	\$8,286	\$407
-Total Effect	<u>145,933</u>	<u>\$5,170</u>	<u>\$8,661</u>	<u>\$16,459</u>	<u>\$496</u>
Retailer Margin Direct Effect	34,045	\$1,189	\$1,672	\$2,496	\$338
Restaurant Margin Direct Effect	3,648	\$96	\$138	\$245	\$18
Total All Industries	<u>183,625</u>	<u>\$6,455</u>	<u>\$10,470</u>	<u>\$19,200</u>	<u>\$851</u>

Values in millions 2013 dollars, and employment in fulltime and part-time jobs.

Estimates reflect total multiplier effects for producer margin, and direct effects only for retailer and restaurant margins.

Total economic impacts of local food consumption in Florida were summarized by major industry group (Table 19). The industry group responsible for food commodity production, Agriculture, Forestry and Fisheries, had the largest impacts of 66,800 jobs, representing 36.4 percent of total employment impacts, and \$2.38 billion in value added (22.7%). The Retail Trade industry group also had large impacts from retail sales of local foods, including 38,759 jobs and \$1.63 billion in value added. The Accommodation and Food Services industry group, which encompasses restaurants, had impacts of 9,126 jobs and \$321 million in value added. Wholesale Trade and Transportation/Warehousing sector had impacts of 38,759 jobs and 5,385 jobs, respectively, representing the margined activities for local foods sold through intermediated market channels at grocery stores and restaurants. Other major industry groups with major impacts by virtue of economic linkages captured in the regional multipliers, included Health and Social Services (9,607 jobs), Government (8,634 jobs), Professional, Scientific and Technical Services (5,488 jobs), Finance/Insurance (5,404 jobs), Real Estate and Rentals (5,266 jobs), and Administrative and Waste Services (5,103 jobs).



**Table 19. Summary of total economic impacts of local food purchases in Florida in 2011-12, by major industry group**

Industry Group (NAICS)	Employment (jobs)	Labor Income (M\$)	Value Added (M\$)	Output (M\$)
11. Agriculture, Forestry, Fisheries	66,800	\$1,367.8	\$2,375.1	\$5,495.4
21. Mining	184	\$2.5	\$6.1	\$46.5
22. Utilities	293	\$34.2	\$131.9	\$234.5
23. Construction	4,244	\$203.5	\$234.6	\$458.1
31-33. Manufacturing	3,240	\$183.6	\$350.6	\$1,622.5
42. Wholesale Trade	6,370	\$478.4	\$837.0	\$978.7
44-45. Retail Trade	38,759	\$1,175.6	\$1,631.9	\$1,838.4
48-49. Transportation & Warehousing	5,385	\$237.2	\$303.7	\$524.3
51. Information	1,201	\$95.4	\$213.0	\$439.5
52. Finance & Insurance	5,404	\$283.9	\$595.7	\$1,167.0
53. Real Estate & Rental	5,266	\$86.5	\$1,002.4	\$1,466.1
54. Professional, Scientific & Technical Services	5,488	\$348.1	\$454.5	\$671.3
55. Management Of Companies	608	\$59.8	\$69.0	\$121.2
56. Administrative & Waste Services	5,103	\$160.4	\$194.6	\$312.7
61. Educational Services	1,823	\$64.7	\$73.2	\$118.3
62. Health & Social Services	9,607	\$512.7	\$570.5	\$941.4
71. Arts, Entertainment & Recreation	1,633	\$50.4	\$76.6	\$120.7
72. Accommodation & Food Services	9,126	\$223.3	\$321.2	\$573.7
81. Other Services	4,458	\$167.5	\$187.2	\$309.7
92. Government	8,634	\$719.9	\$841.7	\$935.6
Total All Sectors	<u>183,625</u>	<u>\$6,455.5</u>	<u>\$10,470.5</u>	<u>\$18,375.6</u>

Values in 2013 dollars. Employment represents fulltime and part-time jobs.

Estimates reflect total multiplier effects for producer margin, and direct effects only for retailer and restaurant margins.

### Consumer Attitudes About Local Foods

A series of survey questions asked respondents about their attitudes toward local foods and food systems. In relation to the geographic area in which foods are viewed as “local” or “locally produced”, the largest number of responses (28.9%) were indicated for “within a 100 mile radius of home”, closely followed by “the state of Florida or bordering state” (27.3%), as shown in Table 20. A somewhat lower share of responses were given for the more restrictive definitions of “own city or town” (11.4%) and “own county” (14.6%). A small share selected “the southeast U.S. region” (3.9%) as locally produced, and 13.8 percent didn’t know or did not answer. Note that respondents were allowed to choose any combination of the area definitions offered, but these data represent the total number and percentage of responses for the largest geographic area definition chosen. Some respondents commented that their conception of local food was based on the degree of freshness or length of time from harvest to market, rather than a geographic definition, and that they were willing to accept a broader definition of local in order to have access to a wider variety of foods.

**Table 20. Area in which foods produced are considered to be local in Florida**

Area	Number Observations	Weighted Percentage
Own city or town	135	11.4%
Own county	294	14.6%
Within a radius of 100 miles of home	494	28.9%
The state of Florida or bordering state	466	27.3%
The southeast U.S. region	68	3.9%
Don't know	85	9.7%
No answer	52	4.1%
Total	<u>1594</u>	100%

Results for weighted percentages of respondents reflect sample weighting factors.

Respondents were asked to rate the importance of various attributes of local foods on a scale of “very important”, “moderately important” or “not important”, as shown in Table 21. The attributes that were identified as “very important” by the highest percentage of statewide respondents were “freshness” (90.1%), “food safety” (78.2%), and “nutrition (67.7%), followed by “price” (60.8%), “food security” (56.7%), “pesticide free (49.7%), and “shelf life” (44.0%). The attribute “reduced transportation” was rated as “very important” by a small share (24.7%) of respondents, but as “moderately important” by 27.0 percent. The attributes of “having a relationship to producers” and “organic certified” had the highest share of ratings as “not important”, at 40.7 and 30.5 percent, respectively. Numerous respondents commented that it is important to support their local community by buying local food, or to buy U.S. grown products generally. Comments also indicated that quality attributes such as color, flavor and appearance are important. Although “organic certified” was not highly rated as an attribute of local food, some respondents indicated that they generally associate local food with “organic”, “cage free” and “non-GMO” foods.

**Table 21. Importance of attributes of local foods in Florida**

Region / Attribute	Very Important	Moderately Important	Not Important	Don't Know	No answer
Weighted percentage of respondents					
Freshness	90.1%	4.6%	0.2%	0.8%	4.3%
Nutrition	67.7%	19.7%	2.5%	1.1%	9.0%
Food safety	78.2%	9.9%	1.0%	1.2%	9.7%
Food security	56.7%	16.9%	3.4%	6.4%	16.6%
Organic certified	21.9%	22.6%	30.5%	5.9%	19.1%
Pesticide-free	49.7%	23.4%	9.0%	4.7%	13.1%
Price	60.8%	26.0%	3.9%	1.5%	7.7%
Shelf life	44.0%	29.3%	8.9%	3.3%	14.6%
Reduced transportation	24.7%	27.0%	18.7%	11.1%	18.5%
Having relationship to producers	13.8%	14.1%	40.7%	11.5%	19.9%

Results for weighted percentages of respondents reflect sample weighting factors.

Results for the survey question about how different factors may potentially limit the purchases of locally produced foods, on a scale of “very limiting”, “moderately limiting”, or “not limiting”, are shown in Table 22. The factors that were rated as “very limiting” by the highest percentage of respondents were “high price” (34.5%),

“unavailability or limited selection of local foods in your area” (26.5%), “not knowing whether food is truly local as labeled” (24.5%), “farmer’s market days or times are inconvenient” (20.9%), and “seasonality” (20.3%). Respondents commented that they could generally get local fruits and vegetables, but struggled to find local meats, seafood and dairy products. Low income respondents who use food stamps (Supplemental Nutrition Assistance Program benefits) for purchasing food said that they could not afford to buy local. Respondents also indicated that they often did not know where to buy local food because it is not widely advertised, or not fully labeled at retail stores. It was suggested that more local food should be made available in grocery stores or through delivery services, and that longer hours of operation and better parking were needed to make shopping at farmer’s markets more convenient. Other factors that were rated as “moderately limiting” by a high percentage of respondents were “Seasonality” (46.7%), “Unavailability or limited selection of local foods in your area” (38.8%), and “High Price” (30.6%). Respondents commented that some vendors at farmer’s markets were not local producers, which reduced their trust in purchasing from the market. Some respondents also commented that they had concerns about lack of refrigeration of perishable foods at farmer’s markets. Factors that were generally perceived as “not limiting” were “time required for preparation of raw foods” (51.5%), “lacking knowledge to prepare local foods” (53.4%) and “lacking transportation to market locations” (57.9%).

**Table 22. Factors potentially limiting purchases of locally produced foods in Florida**

Factor	Very Limiting	Moderately Limiting	Not Limiting	Don't Know	No answer
	Weighted percentage of respondents				
Unavailability or limited selection of local foods in your area	26.5%	38.8%	13.4%	10.1%	11.2%
Seasonality (i.e. available only certain times of year)	20.3%	46.7%	12.8%	8.7%	11.6%
Not knowing whether food is truly local as labeled	24.5%	27.2%	20.1%	15.0%	13.1%
High price	34.5%	30.6%	14.5%	6.7%	13.7%
Farmer’s market days or times are inconvenient	20.9%	27.5%	25.3%	10.7%	15.6%
Congestion/parking at farmer’s markets	10.1%	19.4%	41.6%	12.7%	16.1%
Time required for preparation of raw foods	8.4%	17.3%	51.5%	7.8%	14.9%
Lacking knowledge to prepare local foods	7.1%	14.6%	53.4%	9.2%	15.7%
Lacking transportation to market locations	9.5%	10.0%	57.9%	7.8%	14.8%
Lacking storage capacity or refrigeration for quantity purchases	18.5%	24.7%	36.3%	6.7%	13.8%

Results for weighted percentages of respondents reflect demographic and geographic weighting factors.

### Socio-Economic Factors and Attitudes Affecting Local Food Purchases

Multiple linear regression analysis was used to examine the relationship of local food purchases to socio-economic and attitudinal factors. The significance of each factor was tested using the F test, which considers the ratio of the sum of squared deviations for each factor in relation to the total model sum of squares. The regression model for total local food purchases from all market outlets had an R-square of 0.337, meaning that the model accounted for 33.7 percent of variation in the value of local food purchases (Table 23). The analysis revealed that respondent Age, Gender, Household income, Educational attainment, and Number of persons in the household were all significantly related to the total value of local food purchases from all market outlets ( $p < 0.05$ ). The two-factor interaction variables of Age-Household income, Age-Educational attainment, and Household income-Number of persons in the household, were also statistically significant in the regression model. In addition, respondent ratings of the importance of some attributes of local food were significant predictors of local food purchasing behavior, including “Pesticide free” and “Having a relationship to producers”, while the potentially limiting factors that were significant predictors of local food purchasing were

“Unavailability or limited selection of local foods in your area”, “Not knowing if foods are truly local as labeled”, “High price”, and “Lacking transportation to market locations”.

For value of local foods purchased at retail stores, the regression model had an R-square of 0.446. Socioeconomic factors that were statistically significant in this regression included Gender, Number of persons in household, Type of residential area, Age-Household income, Age-Educational attainment, Household income-Dwelling type, and Dwelling type-Type of residential area. The attributes “Food safety”, “Organic”, “Shelf life”, and “Relationship to producer” were also significant determinants of local food purchases, as well as the limiting factors “High price”, “Not knowing if truly local...”, “Lacking knowledge to prepare local foods”, and “Lacking storage for volume purchases” (Table 23).

The regression model explaining the value of purchases at farmer’s markets, roadside stands and U-pick operations, had an R-square of 0.410. Significant socioeconomic factors in this model included Age, Educational attainment, Household income, Number of persons in household, Age-Household income, Household income-Number of persons in household. The only significant attribute was “Relationship to producer”. Significant limiting factors included “Farmer’s markets inconvenient”, “Lacking knowledge to prepare local foods”, and “Lacking transportation to markets” (Table 23).

For Community Supported Agriculture, the only significant factors were Age, Household income, and Age-Household income, and the model R-square was only 0.114, due to a very limited sample of respondents who reported purchasing through this channel. For purchases from producers by special arrangement and purchases of local food at restaurants, there were no specific factors and attributes with statistically significant relationships, and model R-square values were 0.148 and 0.208, respectively (Table 23).

Estimated regression coefficients for each factor level in the model of total value of local food purchases are presented in Appendix Table A1. The magnitude and direction of the coefficient is interpreted in relation to the “base” level for each factor denoted by the value zero, which in most cases is for observations with missing values indicated by “.” or “don’t know”.

**Table 23. Summary of regression model results for value of local food purchases in Florida, by market channel**

Model Effect	Total local food purchases all market outlets			Local food purchases at retail stores			Purchases at farmer's markets, roadside stands, U-pick			Community Supported Agriculture			Purchases from producers by special arrangement			Local food purchases at restaurants		
	Num DF	F Value	Pr > F	Num DF	F Value	Pr > F	Num DF	F Value	Pr > F	Num DF	F Value	Pr > F	Num DF	F Value	Pr > F	Num DF	F Value	Pr > F
Model	213	2E+06	<.0001 *	191	23.11	<.0001 *	208	46.24	<.0001 *	212	0.51	1	208	1E+05	<.0001 *	198	20.33	<.0001 *
Intercept	1	5.81	0.016 *	1	4.58	0.033 *	1	3.47	0.063	1	0.25	0.619	1	0.81	0.37	1	0.62	0.433
Survey Group	1	0.77	0.380	1	0.18	0.669	1	0.43	0.514	1	0.05	0.823	1	0.72	0.395	1	2.5	0.114
Age	5	4.95	0.000 *	5	1.11	0.352	5	7.17	<.0001 *	5	3.27	0.006 *	5	1.32	0.251	5	1.28	0.269
Gender	2	4.08	0.017 *	2	3.06	0.047 *	2	0.11	0.895	2	0.84	0.431	2	0.47	0.623	2	2.1	0.122
Household Income	7	6.38	<.0001 *	7	1.85	0.075	7	5.62	<.0001 *	7	5.66	<.0001 *	7	0.89	0.515	7	0.32	0.943
Educational Attainment	5	2.49	0.030 *	5	1.85	0.101	5	2.38	0.037 *	5	0.73	0.601	5	0.42	0.838	5	0.31	0.91
Florida Region	8	1.12	0.346	8	1.4	0.193	8	1.06	0.391	8	0.54	0.827	8	0.18	0.994	8	0.39	0.925
Dwelling Type	2	1.08	0.338	2	0.09	0.917	2	0.76	0.466	2	0.14	0.87	2	0.25	0.775	2	0.53	0.587
Number Persons In Household	4	4.31	0.002 *	4	3.55	0.007 *	4	8.05	<.0001 *	4	0.83	0.505	4	0.47	0.761	4	1.31	0.265
Type Of Residential Area	6	0.98	0.439	6	3.33	0.003 *	6	1.24	0.284	6	0.32	0.926	6	0.29	0.94	6	0.33	0.921
Age*Household Income	26	2.31	0.000 *	22	2.22	0.001 *	25	5.13	<.0001 *	26	2.51	<.0001 *	24	0.12	1	22	0.86	0.652
Age*Educational Attainment	21	3.14	<.0001 *	18	2.44	7E-04 *	20	1.37	0.129	21	0.23	1	20	0.22	1	19	0.38	0.993
Age*Gender	8	1.43	0.181	6	0.97	0.444	8	0.88	0.536	8	0.47	0.879	8	0.3	0.967	7	1.04	0.403
Household Income*Number Persons In Household	22	1.81	0.012 *	21	1.19	0.253	21	4.9	<.0001 *	22	0.22	1	21	0.57	0.942	20	0.38	0.994
Household Income*Dwelling Type	11	0.91	0.534	9	5.52	<.0001 *	11	1.61	0.09	11	0.41	0.95	11	0.46	0.927	10	0.65	0.769
Dwelling Type*Type Of Residential Area	12	0.8	0.651	11	2.84	0.001 *	12	1.52	0.11	12	0.28	0.992	12	0.16	1	10	0.18	0.998
Area Considered Local	6	1.16	0.326	6	1.39	0.217	6	1.78	0.099	6	0.56	0.76	6	0.35	0.912	6	0.62	0.714
<u>Attributes</u>																		
Freshness	4	0.55	0.702	4	0.38	0.823	4	0.66	0.618	4	0.29	0.881	4	0.34	0.854	4	0.2	0.937
Nutrition	4	1.82	0.122	4	0.76	0.554	4	1.38	0.238	4	0.41	0.801	4	0.28	0.893	4	1.33	0.257
Food Safety	4	2.31	0.055	4	3.28	0.011 *	4	0.51	0.728	4	0.49	0.743	4	0.36	0.841	4	0.73	0.574
Food Security	4	1.94	0.101	4	1.56	0.184	4	0.39	0.816	4	0.43	0.786	4	0.45	0.771	4	0.32	0.864

Model Effect	Total local food purchases all market outlets			Local food purchases at retail stores			Purchases at farmer's markets, roadside stands, U-pick			Community Supported Agriculture			Purchases from producers by special arrangement			Local food purchases at restaurants			
	Num DF	F Value	Pr > F	Num DF	F Value	Pr > F	Num DF	F Value	Pr > F	Num DF	F Value	Pr > F	Num DF	F Value	Pr > F	Num DF	F Value	Pr > F	
Organic	4	1.74	0.139	4	2.52	0.04 *	4	0.89	0.468	4	0.3	0.88	4	0.41	0.802	4	0.44	0.777	
Pesticide Free	4	3.57	0.007 *	4	1.92	0.105	4	1.31	0.263	4	0.76	0.551	4	0.37	0.832	4	0.69	0.599	
Price	4	1.25	0.287	4	1.06	0.376	4	1.56	0.183	4	0.53	0.713	4	0.26	0.904	4	0.59	0.669	
Shelf Life	4	1.92	0.105	4	3.12	0.015 *	4	0.92	0.451	4	0.54	0.71	4	0.54	0.707	4	1.05	0.382	
Reduced Transportation	4	0.86	0.488	4	0.73	0.573	4	1.5	0.199	4	0.32	0.867	4	0.41	0.799	4	1	0.408	
Relationship To Producer	4	3	0.018 *	4	3.31	0.011 *	4	6.41	<.0001 *	4	0.45	0.771	4	0.48	0.747	4	0.3	0.877	
<u>Limiting Factors</u>																			
Unavailability	4	4.01	0.003 *	4	2.02	0.089	4	1.83	0.121	4	0.83	0.503	4	0.37	0.828	4	0.35	0.844	
Seasonality	4	2.18	0.069	4	0.75	0.56	4	1.47	0.21	4	0.87	0.479	4	0.29	0.883	4	0.66	0.62	
Not Knowing If Truly Local As Labeled	4	2.54	0.038 *	4	2.41	0.048 *	4	0.73	0.572	4	0.75	0.557	4	0.31	0.871	4	1.08	0.367	
High Price	4	4.12	0.003 *	4	4.52	0.001 *	4	0.74	0.565	4	0.92	0.449	4	0.28	0.889	4	0.74	0.562	
Farmers Markets Inconvenient	4	0.5	0.738	4	1.27	0.28	4	3.85	0.004 *	4	0.5	0.737	4	0.29	0.884	4	0.48	0.754	
Congestion At Markets	4	1.88	0.111	4	1.66	0.156	4	1.44	0.218	4	0.16	0.956	4	0.28	0.891	4	0.54	0.707	
Time To Prepare	4	2.26	0.061	4	1.32	0.261	4	1.71	0.146	4	0.59	0.669	4	0.28	0.893	4	0.97	0.424	
Lacking Knowledge To Prepare Local Foods	4	1.58	0.176	4	2.96	0.019 *	4	3.17	0.013 *	4	0.55	0.7	4	0.29	0.884	4	0.77	0.547	
Lacking Transportation To Market	4	3.06	0.016 *	4	1.4	0.233	4	3.22	0.012 *	4	0.36	0.839	4	0.3	0.878	4	0.54	0.71	
Lacking Storage For Volume Purchases	4	1.23	0.297	4	2.92	0.02 *	4	1.25	0.29	4	0.69	0.598	4	0.35	0.843	4	0.26	0.905	
Number of Observations	1599			1030			1530			1585			1481			1054			
Sum of Weights	5E+06			3E+06			5E+06			5E+06			5E+06			4E+06			
Weighted Mean	1513			1836			350.9			2.086			18.31			86.01			
Weighted Sum	8E+09			6E+09			2E+09			1E+07			9E+07			3E+08			
R-square	0.337			0.446			0.41			0.114			0.148			0.208			
Root MSE	2227			2189			621.9			45.26			422.2			517			

Model Effect	Total local food purchases all market outlets			Local food purchases at retail stores			Purchases at farmer's markets, roadside stands, U-pick			Community Supported Agriculture			Purchases from producers by special arrangement			Local food purchases at restaurants		
	Num DF	F Value	Pr > F	Num DF	F Value	Pr > F	Num DF	F Value	Pr > F	Num DF	F Value	Pr > F	Num DF	F Value	Pr > F	Num DF	F Value	Pr > F
Denominator DF	1598			1029			1529			1584			1480			1053		

Asterisks denote model effects that were statistically significant at the  $p < .05$  level.

Source: SAS software, *SurveyReg* procedure (SAS Institute, 2011).

The estimated average annual purchases per respondent household of local foods through all market channels are summarized for each level of demographic variables in Table 24, with statistically significant differences ( $p < 0.05$ ) between mean values indicated by different Tukey grouping letters. Average purchases by respondents aged 18-24 years (\$2,089) were higher than persons 25-44 or 45-64. Purchases by females (\$1,272) were higher than for males (\$1,012), although this difference was not statistically significant. Purchases of local food were positively associated with larger household size, with households of two persons (\$1,555) or three to five persons (\$1,831) significantly greater than single person households (\$665). In contrast to previous study findings, local food purchases were not consistently related to annual household income or educational attainment. Also, there were no significant difference across Florida regions, type of residential area, or dwelling type. Purchases were generally larger for respondents who considered the state or region to be “local” than for those who considered it to be the “city or town” or “100 miles or less”, although again this difference was not significant (Table 24).

The mean value of total annual local food purchases across attributes of local food and limiting factors are summarized in Tables 25 and 26, respectively. Significant purchasing differences by food attributes or limiting factors are identified with asterisks. Respondents who reported that the attribute of “Nutrition” was “very important” or “moderately important” had higher purchases of local food than those who said it was “not important” (Table 25). The average value of purchases by respondents for whom the attribute “Organic” was very important were greater than those who said it was not important. Respondents who answered that “Having a relationship to producers” was “very important” had greater purchases of local food than those who said it was moderately important or not important. Contrary to expectations, respondents who felt that “Pesticide Free” was very important had lower purchases. Negative values in these results represent anomalies due to small sample sizes. Local food purchases were generally higher for respondents indicating that the limiting factor “Not knowing whether foods are truly local as advertised” was either very limiting or not limiting (Table 26). Respondents who indicated that “Lacking transportation to markets”, was very limiting had higher average annual purchases of local foods. This result suggests there is a strong willingness to purchase even more local foods if they were available more conveniently. Surprisingly, the factors “Unavailability of local foods in my area” and “High price”, which are often cited as limitations for local food purchasing, were not significant in this analysis.



**Table 24. Summary of regression model estimates of value of total local food purchases per respondent household in Florida in relation to demographic variable levels**

Factor / Level	Mean	Tukey Grouping
<b>Age (Years)</b>		
18-24	\$2,089	A
25-44	\$1,068	B
45-64	\$1,148	B
65-84	\$1,208	AB
85+	\$979	AB
<b>Gender</b>		
Female	\$1,272	A
Male	\$1,012	A
<b>Annual Household Income</b>		
Less Than \$25,000	\$1,677	AB
\$25,000-\$49,999	\$1,856	A
\$50,000-\$74,999	\$1,446	AB
\$75,000-\$99,999	\$1,510	AB
\$100,000-\$149,999	\$1,609	AB
\$150,000+	\$1,390	AB
Don't Know	\$938	B
<b>Educational Attainment</b>		
Primary School	\$1,129	A
High School	\$1,533	A
College, No Degree	\$1,411	A
College Degree	\$1,284	A
Graduate Degree	\$1,548	A
<b>Number Persons In Household*</b>		
One	\$665	B
Two	\$1,555	A
Three-Five	\$1,831	A
Six+	\$2,521	AB
<b>Dwelling Type</b>		
Single Family (S)	\$1,072	A
Multifamily (M)	\$1,145	A
<b>Florida Region</b>		
Orlando	\$1,699	A
Gainesville	\$1,712	A
Miami-Fort Lauderdale	\$1,692	A
Jacksonville	\$1,425	A
Tampa-St. Petersburg	\$1,527	A
Sarasota-Bradenton	\$1,597	A
Pensacola	\$1,014	A
Tallahassee	\$2,039	A
Panama City	\$1,368	A
<b>Type of Residential Area</b>		
Large City	\$1,496	A
Medium City	\$1,689	A
Small City	\$1,440	A
Town	\$1,654	A
Rural	\$1,535	A
<b>Area Considered Local</b>		
City Or Town	\$1,250	A
County	\$1,422	A
100 Miles Or Less	\$1,189	A
State	\$1,507	A
Southeast Region	\$1,686	A

Factors with statistically significant differences among levels are indicated with an asterisk, and different Tukey grouping letters (within a demographic group) indicate significant difference in mean value (p<.05).

Source: SAS software, *SurveyReg* procedure, LSMEANS option, and *Tukey-Kramer* multiple comparison test (SAS Institute, 2011).

**Table 25. Summary of regression model estimates of value of total local food purchases per respondent household in Florida in relation to local food attribute variable levels**

Attributes	Very Important	Moderately Important	Not Important	Don't Know
Freshness	\$1,391	\$1,119	\$1,765	\$2,159
Nutrition	\$1,955	\$1,992	\$1,317	\$75
Food Safety	\$1,326	\$774	\$1,469	\$2,587
Food Security	\$1,764	\$1,760	\$1,229	\$1,005
Organic*	\$1,958	\$1,448	\$1,041	\$1,298
Pesticide Free*	\$789	\$1,467	\$1,744	\$2,376
Price	\$1,588	\$1,685	\$2,116	-\$77
Shelf Life	\$1,590	\$1,595	\$1,726	\$1,141
Reduced Transportation	\$1,159	\$1,464	\$1,252	\$1,285
Relationship to Producer*	\$968	\$1,898	\$934	\$1,927

Asterisks indicate attributes with statistically significant differences in levels (P<.05).

Source: SAS software, *SurveyReg* procedure, LSMEANS option and *Tukey-Kramer* multiple comparison test (SAS Institute, 2011).

**Table 26. Summary of regression model estimates of value of total local food purchases per respondent household in Florida in relation to limiting factor variable levels**

Limiting Factors	Very Limiting	Moderately Limiting	Not Limiting	Don't Know
Unavailability In My Area	\$1,945	\$1,554	\$1,300	\$473
Seasonality	\$1,716	\$1,615	\$1,189	\$1,846
Not Knowing If Truly Local	\$1,751	\$1,040	\$1,148	\$1,459
High Price*	\$1,848	\$1,963	\$2,106	\$272
Farmer's Markets Inconvenient	\$1,088	\$1,272	\$1,424	\$1,593
Congestion at Markets*	\$1,850	\$1,196	\$1,411	\$1,267
Time to Prepare Local Foods*	\$785	\$1,256	\$795	\$3,200
Lacking Knowledge to Prepare Local Foods*	\$1,543	\$2,156	\$1,608	\$336
Lacking Transportation to Markets	\$1,749	\$785	\$1,794	\$1,306
Lacking Storage for Volume Purchases	\$1,163	\$1,107	\$1,523	\$2,080

Asterisks indicate attributes with statistically significant differences in levels (P<.05).

Source: SAS software, *SurveyReg* procedure, LSMEANS option and *Tukey-Kramer* multiple comparison test (SAS Institute, 2011).

## Discussion and Conclusions

The present study represents the first known attempt to evaluate purchasing patterns and economic impacts of all forms of local food purchases at a statewide level based on empirical survey information. The survey sample of 1,599 usable responses represented a 21.4 percent response rate, which is deemed acceptable for a contemporary mail survey. The survey sample was generally representative of the Florida population, however, the data were weighted to adjust for age, education and income factors to account for differences in sampling intensity.

The weighted share of respondents who reported purchasing local food at retail grocery stores (52.8%), farmer's markets, roadside stands or U-pick operations (61.7%), and at restaurants (27.8%) indicate that a significant share of Florida residents purchase locally grown or prepared foods through these venues, however very few Florida households purchase foods directly from producers by special arrangement (4.3%) or through Community Supported Agriculture (CSA) organizations (1.1%). In general, this study found that participation in

local food marketing channels in Florida is similar to levels reported for other areas studies using surveys of a representative sample of households, with around two-thirds of consumers patronizing farmer's markets or buying local foods at retail stores.

Survey findings indicate that a majority of respondents held a rather expansive definition of what "local" food means; that it is produced "within a radius of 100 miles of home" (28.9%), "within the state of Florida or bordering states" (27.3%), or even "within the southeast U.S. region" (3.9%), while a relatively small share held the more restrictive definitions of "within my own city or town" (11.4%) or "within my own county" (14.6%).

The estimated total value of local foods purchased by consumers annually through all local market channels in Florida (\$8.314 billion) represented an average of \$1,114 per household. Nearly three-quarters (73%) of all reported local food purchases were at retail stores (\$6.079 billion). The total value of direct farm-to-consumer sales, through farmer's markets, roadside stands, U-pick operations, Community Supported Agriculture organizations, and by special arrangement with growers, was estimated at \$1.916 billion. Local foods purchased for consumption at home (i.e. excluding restaurant purchases) represented 20.1 percent of total food purchases. The per household and overall market share of local food purchases estimated for Florida are higher than has been reported in the literature for other areas and at the national level (Low and Vogel, 2011; USDA-NASS, Census of Agriculture, 2007). This suggests that local food systems in Florida are better developed than most other areas of the United States, perhaps due to the favorable year-round growing conditions. However, these research findings should be taken with some reservations because it is possible that some foods reported by respondents as being of local origin may in fact not have been local, since some market vendors or retailers may be misrepresenting the source of foods.

Consistent with previous studies, this research found that vegetables and fruits were most commonly purchased food types through local market channels, together representing about 39 percent of all local food purchases or \$3.273 billion, while animal products, including fish, beef, poultry, pork, lamb, other meats, dairy, honey and eggs, collectively represented \$3.590 billion or 43 percent of total local food purchases.

This research confirmed that the reasons most people prefer local foods are the attributes "freshness", "food safety" and "nutrition". Other research has suggested that "having a relationship to the producer" may be an important attribute, but this study found only a small minority (14%) considered this very important. This research also confirmed that "high price" and "unavailability or limited selection of local foods in your area" were commonly considered as barriers or limiting factors for further development of local food systems. A significant share of respondents also expressed concerns about "not knowing whether food is truly local as labeled". Indeed, other recent research has shown that customers at farmer's markets commonly have suspicions about the origin of food, and that this affects willingness to purchase, and the perception of benefits of buying local (Gao et al, 2012).

This analysis estimated the total economic impact of locally produced food purchases in Florida using a regional *IMPLAN* input-output model, and attempted to account for the net loss of economic activity in retail grocery stores due to competitive displacement by alternative local-market channels. It was assumed that purchases through local market channels represented new final demand to the agriculture or food processing sectors, and that this replaced foods that would otherwise be imported to the state. The very large total economic impacts, including over 183,000 fulltime and part-time jobs, and over \$10 billion in value added or Gross State Product, confirm that local food systems make an important economic contribution to the state.

Regionally within the state, it was found that local food purchases represent a larger share of total food purchases for at-home consumption in central and north Florida, including 36 percent in the Tallahassee area, 26 percent in

the Gainesville area, and nearly 22 percent in the Orlando area. Consumer purchasing characteristics and attitudes about local food in the 10-county area of north-central Florida that was sampled separately in the survey were found to be very consistent with the state as a whole. Results for this subsample are provided in a companion report.

Statistical analysis of the survey data using multiple linear regression procedures found that demographic factors of age, gender, household income, educational attainment, and number of persons in the household were all significant predictors of local food purchasing behavior through one or more market channels. There were also significant interactions between these factors, indicating that demographic characteristics affect local food purchasing in a complex fashion. These relationships should be explored in further research.

Among the implications of this research for policy, the results suggest that providing better access to farmer's markets, and providing education on how to prepare and store local foods would support greater purchasing of local foods. Perhaps stronger regulations on labeling of source of origin, as is required for international imports, would help to address consumer's concerns about truth in advertising of claims for local foods. Providing additional opportunities for local producers to gain exposure to consumers would support the strong desire expressed by survey respondents for having a relationship with producers. The fact that local foods are often higher in price than conventional mass market foods was noted as a limiting factor for many lower income consumers, and it remains a challenge to the local food movement to make their products more competitive.

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## Appendix A: Regression Model Coefficients

**Table A1. Summary of estimated regression coefficients for model of total value of local food purchases through all market outlets in Florida**

Dependent Variable / Parameter	Estimate	Standard Error	t Value	Pr >  t	
Intercept	-8109.47	5261.16	-1.54	0.123	
Survey Group Rest Of Florida	-18.63	1652.09	-0.01	0.991	
Survey Group North-Central Florida	-223.12	1653.82	-0.13	0.893	
Survey Group	0.00	0.00	.	.	
Age 45-64	2078.24	3458.52	0.60	0.548	
Age 65-84	-641.33	3627.61	-0.18	0.860	
Age 25-44	-178.40	3430.28	-0.05	0.959	
Age 18-24	4187.28	2759.81	1.52	0.129	
Age (Missing)	2844.06	3006.88	0.95	0.344	
Age 85+	0.00	0.00	.	.	
Household Income Less Than \$25,000	10069.59	4399.91	2.29	0.022	*
Household Income \$25,000-\$49,999	10007.15	4159.40	2.41	0.016	*
Household Income \$50,000-\$74,999	7168.19	4050.31	1.77	0.077	
Household Income \$75,000-\$99,000	5858.66	2489.92	2.35	0.019	*
Household Income (Missing)	4923.46	5018.54	0.98	0.327	
Household Income \$100,000-\$149,000	7525.13	4565.69	1.65	0.100	
Household Income \$150,000+	2942.97	2464.09	1.19	0.233	
Household Income Don't Know	0.00	0.00	.	.	
Educational Attainment College Degree	3423.34	2467.48	1.39	0.166	
Educational Attainment College, No Degree	1050.27	2673.36	0.39	0.695	
Educational Attainment Graduate Degree	3653.91	3540.55	1.03	0.302	
Educational Attainment High School	1092.69	3146.92	0.35	0.729	
Educational Attainment Primary School	2004.71	1769.65	1.13	0.258	
Educational Attainment (Missing)	0.00	0.00	.	.	
Region Orlando	519.70	461.40	1.13	0.260	
Region Gainesville	1038.82	538.79	1.93	0.054	
Region Miami-Fort Lauderdale	716.43	441.53	1.62	0.105	
Region Jacksonville	521.72	484.09	1.08	0.281	
Region Tampa-St. Petersburg	536.10	467.18	1.15	0.251	
Region Sarasota-Bradenton	447.17	474.84	0.94	0.347	
Region Pensacola	-16.93	490.70	-0.03	0.973	
Region Tallahassee	1185.88	673.58	1.76	0.079	
Region Panama City	0.00	0.00	.	.	
Region	0.00	0.00	.	.	
Dwelling Type Single Family	4127.24	4261.62	0.97	0.333	
Dwelling Type Multifamily	3119.41	4104.73	0.76	0.447	
Dwelling Type	0.00	0.00	.	.	
Gender Female	-2438.65	2439.35	-1.00	0.318	
Gender Male	-4476.24	1677.35	-2.67	0.008	*
Gender (Missing)	0.00	0.00	.	.	
Number Persons In Household Two	3171.27	1847.92	1.72	0.086	
Number Persons In Household Three To Five	3724.27	1909.51	1.95	0.051	
Number Persons In Household One	3160.83	1806.18	1.75	0.080	
Number Persons In Household (Missing)	2836.16	2652.69	1.07	0.285	
Number Persons In Household Six Or More	0.00	0.00	.	.	
Type Of Residential Area Medium City	1807.30	1782.82	1.01	0.311	
Type Of Residential Area Small City	1194.96	1917.02	0.62	0.533	
Type Of Residential Area Rural	2128.85	1964.69	1.08	0.279	
Type Of Residential Area Large City	5043.85	3711.85	1.36	0.174	
Type Of Residential Area Town	2972.29	3918.81	0.76	0.448	
Type Of Residential Area Don't Know	413.68	2889.86	0.14	0.886	
Type Of Residential Area (Missing)	0.00	0.00	.	.	
Area Considered Local 100 Miles Or Less	-236.12	432.54	-0.55	0.585	
Area Considered Local State	104.11	454.81	0.23	0.819	
Area Considered Local County	90.94	466.24	0.20	0.845	
Area Considered Local City Or Town	-364.93	511.37	-0.71	0.476	
Area Considered Local Don't Know	484.57	560.42	0.86	0.387	
Area Considered Local Southeast Region	212.02	570.48	0.37	0.710	
Area Considered Local	0.00	0.00	.	.	
Attributes- Freshness Very Important	615.00	902.01	0.68	0.496	

Dependent Variable / Parameter	Estimate	Standard Error	t Value	Pr >  t
Attributes- Freshness Moderately Important	596.29	1005.99	0.59	0.553
Attributes- Freshness (Missing)	39.06	1020.20	0.04	0.970
Attributes- Freshness Don't Know	1232.66	1204.10	1.02	0.306
Attributes- Freshness Not Important	0.00	0.00	.	.
Attributes- Nutrition Very Important	1372.03	560.10	2.45	0.014 *
Attributes- Nutrition Moderately Important	1275.77	523.69	2.44	0.015 *
Attributes- Nutrition (Missing)	1274.88	645.93	1.97	0.049 *
Attributes- Nutrition Not Important	693.47	653.24	1.06	0.289
Attributes- Nutrition Don't Know	0.00	0.00	.	.
Attributes- Food Safety Very Important	-1475.90	859.52	-1.72	0.086
Attributes- Food Safety Moderately Important	-2219.44	897.81	-2.47	0.014 *
Attributes- Food Safety (Missing)	-1275.77	905.47	-1.41	0.159
Attributes- Food Safety Not Important	-1441.03	1079.87	-1.33	0.182
Attributes- Food Safety Don't Know	0.00	0.00	.	.
Attributes- Food Security Very Important	417.08	427.45	0.98	0.329
Attributes- Food Security (Missing)	107.78	509.51	0.21	0.833
Attributes- Food Security Moderately Important	636.96	419.17	1.52	0.129
Attributes- Food Security Don't Know	-321.32	481.99	-0.67	0.505
Attributes- Food Security Not Important	0.00	0.00	.	.
Attributes- Organic Not Important	-186.37	407.78	-0.46	0.648
Attributes- Organic Moderately Important	105.14	494.78	0.21	0.832
Attributes- Organic Very Important	690.74	485.02	1.42	0.155
Attributes- Organic (Missing)	381.23	534.33	0.71	0.476
Attributes- Organic Don't Know	0.00	0.00	.	.
Attributes- Pesticide Free Very Important	-1808.36	751.28	-2.41	0.016 *
Attributes- Pesticide Free Moderately Important	-1166.20	780.98	-1.49	0.136
Attributes- Pesticide Free (Missing)	-2065.44	855.14	-2.42	0.016 *
Attributes- Pesticide Free Not Important	-628.09	818.54	-0.77	0.443
Attributes- Pesticide Free Don't Know	0.00	0.00	.	.
Attributes- Price Very Important	1745.98	1315.14	1.33	0.185
Attributes- Price Moderately Important	1960.21	1340.63	1.46	0.144
Attributes- Price (Missing)	1622.89	1352.92	1.20	0.231
Attributes- Price Not Important	2527.35	1406.28	1.80	0.073
Attributes- Price Don't Know	0.00	0.00	.	.
Attributes- Shelf Life Very Important	1077.37	836.30	1.29	0.198
Attributes- Shelf Life Moderately Important	898.07	791.66	1.13	0.257
Attributes- Shelf Life (Missing)	253.86	883.59	0.29	0.774
Attributes- Shelf Life Not Important	1153.58	814.49	1.42	0.157
Attributes- Shelf Life Don't Know	0.00	0.00	.	.
Attributes- Reduced Transportation Moderately Important	178.09	360.85	0.49	0.622
Attributes- Reduced Transportation Very Important	-53.28	407.77	-0.13	0.896
Attributes- Reduced Transportation Not Important	4.88	408.79	0.01	0.991
Attributes- Reduced Transportation (Missing)	553.09	525.79	1.05	0.293
Attributes- Reduced Transportation Don't Know	0.00	0.00	.	.
Attributes- Relationship To Producers Not Important	-1062.16	428.98	-2.48	0.013 *
Attributes- Relationship To Producers (Missing)	-427.48	546.34	-0.78	0.434
Attributes- Relationship To Producers Moderately Important	-986.88	461.06	-2.14	0.033 *
Attributes- Relationship To Producers Very Important	-96.14	462.55	-0.21	0.835
Attributes- Relationship To Producers Don't Know	0.00	0.00	.	.
Limiting Factors-Unavailability Of Local Foods Moderately Limiting	1105.68	334.99	3.30	0.001 *
Limiting Factors-Unavailability Of Local Foods Very Limiting	1519.97	385.51	3.94	<.0001 *
Limiting Factors-Unavailability Of Local Foods Not Limiting	807.44	369.20	2.19	0.029 *
Limiting Factors-Unavailability Of Local Foods (Missing)	1222.48	502.92	2.43	0.015 *
Limiting Factors-Unavailability Of Local Foods Don't Know	0.00	0.00	.	.
Limiting Factors-Seasonality Of Local Foods Moderately Limiting	-380.78	413.00	-0.92	0.357
Limiting Factors-Seasonality Of Local Foods Very Limiting	-358.25	428.03	-0.84	0.403
Limiting Factors-Seasonality Of Local Foods Not Limiting	-864.92	438.19	-1.97	0.049 *
Limiting Factors-Seasonality Of Local Foods (Missing)	-1089.30	517.18	-2.11	0.035 *
Limiting Factors-Seasonality Of Local Foods Don't Know	0.00	0.00	.	.
Limiting Factors-Not Knowing If Foods Are Truly Local As Labeled Moderately Limiting	257.93	321.19	0.80	0.422
Limiting Factors-Not Knowing If Foods Are Truly Local As Labeled Not Limiting	-328.97	356.75	-0.92	0.357
Limiting Factors-Not Knowing If Foods Are Truly Local As Labeled Very Limiting	-351.94	336.34	-1.05	0.296
Limiting Factors-Not Knowing If Foods Are Truly Local As Labeled (Missing)	553.27	562.02	0.98	0.325
Limiting Factors-Not Knowing If Foods Are Truly Local As Labeled Don't Know	0.00	0.00	.	.



Dependent Variable / Parameter	Estimate	Standard Error	t Value	Pr >  t	
Limiting Factors-High Price Moderately Limiting	1578.05	514.87	3.06	0.002	*
Limiting Factors-High Price Very Limiting	1413.26	550.29	2.57	0.010	*
Limiting Factors-High Price Not Limiting	1769.45	551.82	3.21	0.001	*
Limiting Factors-High Price (Missing)	549.50	713.21	0.77	0.441	
Limiting Factors-High Price Don't Know	0.00	0.00	.	.	
Limiting Factors-Farmer's Markets Inconvenient Moderately Limiting	-350.20	412.61	-0.85	0.396	
Limiting Factors-Farmer's Markets Inconvenient Not Limiting	-73.03	431.55	-0.17	0.866	
Limiting Factors-Farmer's Markets Inconvenient Very Limiting	-353.50	404.33	-0.87	0.382	
Limiting Factors-Farmer's Markets Inconvenient (Missing)	127.80	759.22	0.17	0.866	
Limiting Factors-Farmer's Markets Inconvenient Don't Know	0.00	0.00	.	.	
Limiting Factors-Congestion At Markets Not Limiting	678.00	284.85	2.38	0.017	*
Limiting Factors-Congestion At Markets Moderately Limiting	264.50	316.71	0.84	0.404	
Limiting Factors-Congestion At Markets (Missing)	170.17	595.01	0.29	0.775	
Limiting Factors-Congestion At Markets Don't Know	138.18	486.71	0.28	0.777	
Limiting Factors-Congestion At Markets Very Limiting	0.00	0.00	.	.	
Limiting Factors-Time To Prepare Local Foods Not Limiting	-2462.48	1310.25	-1.88	0.060	
Limiting Factors-Time To Prepare Local Foods Moderately Limiting	-1871.38	1306.90	-1.43	0.152	
Limiting Factors-Time To Prepare Local Foods (Missing)	-2148.47	1357.08	-1.58	0.114	
Limiting Factors-Time To Prepare Local Foods Very Limiting	-2502.42	1254.42	-1.99	0.046	*
Limiting Factors-Time To Prepare Local Foods Don't Know	0.00	0.00	.	.	
Limiting Factors-Lacking Knowledge To Prepare Local Foods Not Limiting	-625.33	443.68	-1.41	0.159	
Limiting Factors-Lacking Knowledge To Prepare Local Foods (Missing)	-393.98	726.29	-0.54	0.588	
Limiting Factors-Lacking Knowledge To Prepare Local Foods Moderately Limiting	-746.36	415.39	-1.80	0.073	
Limiting Factors-Lacking Knowledge To Prepare Local Foods Don't Know	-2164.82	993.47	-2.18	0.030	*
Limiting Factors-Lacking Knowledge To Prepare Local Foods Very Limiting	0.00	0.00	.	.	
Limiting Factors-Lacking Transportation To Markets Not Limiting	338.37	606.34	0.56	0.577	
Limiting Factors-Lacking Transportation To Markets (Missing)	285.56	887.69	0.32	0.748	
Limiting Factors-Lacking Transportation To Markets Moderately Limiting	78.84	691.85	0.11	0.909	
Limiting Factors-Lacking Transportation To Markets Very Limiting	-937.24	687.04	-1.36	0.173	
Limiting Factors-Lacking Transportation To Markets Don't Know	0.00	0.00	.	.	
Limiting Factors-Lacking Storage For Volume Purchases Not Limiting	-842.74	700.01	-1.20	0.229	
Limiting Factors-Lacking Storage For Volume Purchases Moderately Limiting	-577.88	686.84	-0.84	0.400	
Limiting Factors-Lacking Storage For Volume Purchases Very Limiting	-1038.04	697.38	-1.49	0.137	
Limiting Factors-Lacking Storage For Volume Purchases (Missing)	-854.25	804.26	-1.06	0.288	
Limiting Factors-Lacking Storage For Volume Purchases Don't Know	0.00	0.00	.	.	
Age*Household Income 45-64 Less Than \$25,000	-795.73	1958.18	-0.41	0.685	
Age*Household Income 45-64 \$25,000-\$49,999	573.90	1782.93	0.32	0.748	
Age*Household Income 45-64 \$50,000-\$74,999	-60.86	2596.62	-0.02	0.981	
Age*Household Income 45-64 \$75,000-\$99,000	-1503.01	1132.62	-1.33	0.185	
Age*Household Income 45-64 (Missing)	-2123.42	3366.90	-0.63	0.528	
Age*Household Income 45-64 \$100,000-\$149,000	-1406.72	4309.78	-0.33	0.744	
Age*Household Income 45-64 \$150,000+	-1514.22	1853.83	-0.82	0.414	
Age*Household Income 45-64 Don't Know	0.00	0.00	.	.	
Age*Household Income 65-84 Less Than \$25,000	-1327.76	1807.02	-0.73	0.463	
Age*Household Income 65-84 \$25,000-\$49,999	-1349.00	1638.84	-0.82	0.411	
Age*Household Income 65-84 \$50,000-\$74,999	-1837.82	2505.68	-0.73	0.463	
Age*Household Income 65-84 \$75,000-\$99,000	-3068.07	1114.12	-2.75	0.006	*
Age*Household Income 65-84 (Missing)	-2328.04	3241.13	-0.72	0.473	
Age*Household Income 65-84 \$100,000-\$149,000	-2718.08	4196.16	-0.65	0.517	
Age*Household Income 65-84 \$150,000+	-4194.19	2099.37	-2.00	0.046	*
Age*Household Income 65-84 Don't Know	0.00	0.00	.	.	
Age*Household Income 25-44 Less Than \$25,000	11.98	1995.68	0.01	0.995	
Age*Household Income 25-44 \$25,000-\$49,999	981.21	1920.46	0.51	0.610	
Age*Household Income 25-44 \$50,000-\$74,999	121.69	2691.68	0.05	0.964	
Age*Household Income 25-44 \$75,000-\$99,000	0.00	0.00	.	.	
Age*Household Income 25-44 (Missing)	-770.93	3423.94	-0.23	0.822	
Age*Household Income 25-44 \$100,000-\$149,000	-1002.49	4366.61	-0.23	0.818	
Age*Household Income 25-44 \$150,000+	0.00	0.00	.	.	
Age*Household Income 25-44 Don't Know	0.00	0.00	.	.	
Age*Household Income 18-24 Less Than \$25,000	180.71	2159.40	0.08	0.933	
Age*Household Income 18-24 \$25,000-\$49,999	5997.00	2437.51	2.46	0.014	*
Age*Household Income 18-24 \$50,000-\$74,999	1463.88	2775.31	0.53	0.598	
Age*Household Income 18-24 \$100,000-\$149,000	-1292.02	4381.36	-0.29	0.768	
Age*Household Income 18-24 Don't Know	0.00	0.00	.	.	

Dependent Variable / Parameter	Estimate	Standard Error	t Value	Pr >  t	
Age*Household Income (Missing) Less Than \$25,000	3728.17	2773.58	1.34	0.179	
Age*Household Income (Missing) \$25,000-\$49,999	-3411.03	3030.83	-1.13	0.261	
Age*Household Income (Missing) \$50,000-\$74,999	4055.03	3950.83	1.03	0.305	
Age*Household Income (Missing) (Missing)	-2447.62	3470.42	-0.71	0.481	
Age*Household Income (Missing) Don't Know	0.00	0.00	.	.	
Age*Household Income 85+ Less Than \$25,000	0.00	0.00	.	.	
Age*Household Income 85+ \$25,000-\$49,999	0.00	0.00	.	.	
Age*Household Income 85+ \$50,000-\$74,999	0.00	0.00	.	.	
Age*Household Income 85+ (Missing)	0.00	0.00	.	.	
Age*Household Income 85+ \$100,000-\$149,000	0.00	0.00	.	.	
Age*Household Income 85+ Don't Know	0.00	0.00	.	.	
Age*Educational Attainment 45-64 College Degree	-6476.59	2696.12	-2.40	0.016	*
Age*Educational Attainment 45-64 College, No Degree	-3753.76	2894.74	-1.30	0.195	
Age*Educational Attainment 45-64 Graduate Degree	-6368.66	3708.65	-1.72	0.086	
Age*Educational Attainment 45-64 High School	-4149.64	3292.60	-1.26	0.208	
Age*Educational Attainment 45-64 Primary School	-5927.29	2381.02	-2.49	0.013	*
Age*Educational Attainment 45-64 (Missing)	0.00	0.00	.	.	
Age*Educational Attainment 65-84 College Degree	-1323.31	2585.67	-0.51	0.609	
Age*Educational Attainment 65-84 College, No Degree	767.59	2800.52	0.27	0.784	
Age*Educational Attainment 65-84 Graduate Degree	-1263.13	3669.75	-0.34	0.731	
Age*Educational Attainment 65-84 High School	572.25	3275.43	0.17	0.861	
Age*Educational Attainment 65-84 Primary School	-338.63	2025.38	-0.17	0.867	
Age*Educational Attainment 65-84 (Missing)	0.00	0.00	.	.	
Age*Educational Attainment 25-44 College Degree	-4095.88	2624.79	-1.56	0.119	
Age*Educational Attainment 25-44 College, No Degree	-1614.50	2909.43	-0.55	0.579	
Age*Educational Attainment 25-44 Graduate Degree	-4565.07	3682.36	-1.24	0.215	
Age*Educational Attainment 25-44 High School	-1339.76	3258.16	-0.41	0.681	
Age*Educational Attainment 25-44 Primary School	-2333.86	2118.11	-1.10	0.271	
Age*Educational Attainment 25-44 (Missing)	0.00	0.00	.	.	
Age*Educational Attainment 18-24 College Degree	-7377.74	2563.42	-2.88	0.004	*
Age*Educational Attainment 18-24 College, No Degree	-4409.51	2668.69	-1.65	0.099	
Age*Educational Attainment 18-24 Graduate Degree	-4406.33	3516.90	-1.25	0.210	
Age*Educational Attainment 18-24 High School	-1956.98	3153.47	-0.62	0.535	
Age*Educational Attainment 18-24 Primary School	0.00	0.00	.	.	
Age*Educational Attainment (Missing) College Degree	0.00	0.00	.	.	
Age*Educational Attainment (Missing) College, No Degree	-4122.92	4040.80	-1.02	0.308	
Age*Educational Attainment (Missing) High School	-2543.20	3430.94	-0.74	0.459	
Age*Educational Attainment (Missing) Primary School	0.00	0.00	.	.	
Age*Educational Attainment (Missing) (Missing)	0.00	0.00	.	.	
Age*Educational Attainment 85+ College Degree	0.00	0.00	.	.	
Age*Educational Attainment 85+ College, No Degree	0.00	0.00	.	.	
Age*Educational Attainment 85+ Graduate Degree	0.00	0.00	.	.	
Age*Educational Attainment 85+ High School	0.00	0.00	.	.	
Age*Educational Attainment 85+ Primary School	0.00	0.00	.	.	
Age*Gender 45-64 Female	2592.99	2624.04	0.99	0.323	
Age*Gender 45-64 Male	4681.19	2066.69	2.27	0.024	*
Age*Gender 45-64 (Missing)	0.00	0.00	.	.	
Age*Gender 65-84 Female	2008.16	2712.36	0.74	0.459	
Age*Gender 65-84 Male	3365.27	1974.77	1.70	0.089	
Age*Gender 65-84 (Missing)	0.00	0.00	.	.	
Age*Gender 25-44 Female	1874.68	2578.11	0.73	0.467	
Age*Gender 25-44 Male	3559.54	1874.56	1.90	0.058	
Age*Gender 25-44 (Missing)	0.00	0.00	.	.	
Age*Gender 18-24 Female	-644.14	2392.21	-0.27	0.788	
Age*Gender 18-24 Male	0.00	0.00	.	.	
Age*Gender (Missing) Female	-580.71	2609.14	-0.22	0.824	
Age*Gender (Missing) Male	0.00	0.00	.	.	
Age*Gender (Missing) (Missing)	0.00	0.00	.	.	
Age*Gender 85+ Female	0.00	0.00	.	.	
Age*Gender 85+ Male	0.00	0.00	.	.	
Household Income*Number Persons In Household Less Than \$25,000 Two	-3884.35	1905.13	-2.04	0.042	*
Household Income*Number Persons In Household Less Than \$25,000 Three To Five	-4250.68	1962.39	-2.17	0.031	*
Household Income*Number Persons In Household Less Than \$25,000 One	-4760.95	1901.75	-2.50	0.012	*
Household Income*Number Persons In Household Less Than \$25,000 (Missing)	1800.20	3018.32	0.60	0.551	

Dependent Variable / Parameter	Estimate	Standard Error	t Value	Pr >  t
Household Income*Number Persons In Household Less Than \$25,000 Six Or More	0.00	0.00	.	.
Household Income*Number Persons In Household \$25,000-\$49,999 Two	-3366.95	2089.60	-1.61	0.107
Household Income*Number Persons In Household \$25,000-\$49,999 Three To Five	-3827.03	2189.37	-1.75	0.081
Household Income*Number Persons In Household \$25,000-\$49,999 One	-4309.22	2083.88	-2.07	0.039 *
Household Income*Number Persons In Household \$25,000-\$49,999 (Missing)	-1818.92	3045.46	-0.60	0.550
Household Income*Number Persons In Household \$25,000-\$49,999 Six Or More	0.00	0.00	.	.
Household Income*Number Persons In Household \$50,000-\$74,999 Two	-3111.76	1945.09	-1.60	0.110
Household Income*Number Persons In Household \$50,000-\$74,999 Three To Five	-3128.20	2016.21	-1.55	0.121
Household Income*Number Persons In Household \$50,000-\$74,999 One	-3347.25	1955.14	-1.71	0.087
Household Income*Number Persons In Household \$50,000-\$74,999 Six Or More	0.00	0.00	.	.
Household Income*Number Persons In Household \$75,000-\$99,000 Two	-2710.17	2163.53	-1.25	0.211
Household Income*Number Persons In Household \$75,000-\$99,000 Three To Five	-2840.38	2208.08	-1.29	0.199
Household Income*Number Persons In Household \$75,000-\$99,000 One	-2400.65	2099.23	-1.14	0.253
Household Income*Number Persons In Household \$75,000-\$99,000 Six Or More	0.00	0.00	.	.
Household Income*Number Persons In Household (Missing) Two	1066.42	1940.04	0.55	0.583
Household Income*Number Persons In Household (Missing) Three To Five	535.60	2133.57	0.25	0.802
Household Income*Number Persons In Household (Missing) One	-58.24	1960.43	-0.03	0.976
Household Income*Number Persons In Household (Missing) (Missing)	0.00	0.00	.	.
Household Income*Number Persons In Household \$100,000-\$149,000 Two	-2728.27	2151.25	-1.27	0.205
Household Income*Number Persons In Household \$100,000-\$149,000 Three To Five	-2308.22	2235.84	-1.03	0.302
Household Income*Number Persons In Household \$100,000-\$149,000 One	-4664.36	2250.74	-2.07	0.038 *
Household Income*Number Persons In Household \$100,000-\$149,000 Six Or More	0.00	0.00	.	.
Household Income*Number Persons In Household \$150,000+ Two	-393.30	1288.83	-0.31	0.760
Household Income*Number Persons In Household \$150,000+ Three To Five	-1140.53	1576.96	-0.72	0.470
Household Income*Number Persons In Household \$150,000+ One	0.00	0.00	.	.
Household Income*Number Persons In Household \$150,000+ Six Or More	0.00	0.00	.	.
Household Income*Number Persons In Household Don't Know Two	0.00	0.00	.	.
Household Income*Number Persons In Household Don't Know Three To Five	0.00	0.00	.	.
Household Income*Number Persons In Household Don't Know One	0.00	0.00	.	.
Household Income*Number Persons In Household Don't Know (Missing)	0.00	0.00	.	.
Household Income*Dwelling Type Less Than \$25,000 S	-3936.90	3467.95	-1.14	0.257
Household Income*Dwelling Type Less Than \$25,000 M	-2677.64	3377.66	-0.79	0.428
Household Income*Dwelling Type Less Than \$25,000	0.00	0.00	.	.
Household Income*Dwelling Type \$25,000-\$49,999 S	-5631.71	3302.74	-1.71	0.088
Household Income*Dwelling Type \$25,000-\$49,999 M	-3638.91	3198.85	-1.14	0.256
Household Income*Dwelling Type \$25,000-\$49,999	0.00	0.00	.	.
Household Income*Dwelling Type \$50,000-\$74,999 S	-2859.66	2715.18	-1.05	0.292
Household Income*Dwelling Type \$50,000-\$74,999 M	-1533.24	2583.45	-0.59	0.553
Household Income*Dwelling Type \$50,000-\$74,999	0.00	0.00	.	.
Household Income*Dwelling Type \$75,000-\$99,000 S	-936.89	956.85	-0.98	0.328
Household Income*Dwelling Type \$75,000-\$99,000 M	0.00	0.00	.	.
Household Income*Dwelling Type (Missing) S	-3457.11	3410.29	-1.01	0.311
Household Income*Dwelling Type (Missing) M	-2102.34	3330.67	-0.63	0.528
Household Income*Dwelling Type (Missing)	0.00	0.00	.	.
Household Income*Dwelling Type \$100,000-\$149,000 S	-2490.97	1715.02	-1.45	0.147
Household Income*Dwelling Type \$100,000-\$149,000 M	0.00	0.00	.	.
Household Income*Dwelling Type \$150,000+ S	-8.49	1128.98	-0.01	0.994
Household Income*Dwelling Type \$150,000+ M	0.00	0.00	.	.
Household Income*Dwelling Type \$150,000+	0.00	0.00	.	.
Household Income*Dwelling Type Don't Know S	0.00	0.00	.	.
Household Income*Dwelling Type Don't Know M	0.00	0.00	.	.
Dwelling Type*Type Of Residential Area S Medium City	-568.00	1836.31	-0.31	0.757
Dwelling Type*Type Of Residential Area S Small City	-122.17	1992.40	-0.06	0.951
Dwelling Type*Type Of Residential Area S Rural	-1051.40	2035.61	-0.52	0.606
Dwelling Type*Type Of Residential Area S Large City	-4083.52	3782.47	-1.08	0.281
Dwelling Type*Type Of Residential Area S Town	-1788.39	3938.45	-0.45	0.650
Dwelling Type*Type Of Residential Area S Don't Know	523.54	2948.93	0.18	0.859
Dwelling Type*Type Of Residential Area S (Missing)	0.00	0.00	.	.
Dwelling Type*Type Of Residential Area M Medium City	-867.11	1807.26	-0.48	0.631
Dwelling Type*Type Of Residential Area M Small City	-1126.07	1968.39	-0.57	0.567
Dwelling Type*Type Of Residential Area M Rural	-2581.36	2334.89	-1.11	0.269
Dwelling Type*Type Of Residential Area M Large City	-4552.33	3793.58	-1.20	0.230
Dwelling Type*Type Of Residential Area M Town	-2949.82	4034.38	-0.73	0.465
Dwelling Type*Type Of Residential Area M Don't Know	331.94	3024.63	0.11	0.913

Dependent Variable / Parameter	Estimate	Standard Error	t Value	Pr >  t
Dwelling Type*Type Of Residential Area M (Missing)	0.00	0.00	.	.
Dwelling Type*Type Of Residential Area Medium City	0.00	0.00	.	.
Dwelling Type*Type Of Residential Area Small City	0.00	0.00	.	.
Dwelling Type*Type Of Residential Area Rural	0.00	0.00	.	.
Dwelling Type*Type Of Residential Area Large City	0.00	0.00	.	.
Dwelling Type*Type Of Residential Area Town	0.00	0.00	.	.
Dwelling Type*Type Of Residential Area Don't Know	0.00	0.00	.	.
Dwelling Type*Type Of Residential Area (Missing)	0.00	0.00	.	.

Asterisks denote coefficients that were statistically significant at the  $p < .05$  level. Levels indicated by dots represent missing values.

Estimates not available for “base” parameter levels with lowest frequency of observations within each dependent variable.

Source: SAS software, *SurveyReg* procedure (SAS Institute, 2011).

## Appendix B: Local Food Survey Questionnaire

Cover page of 5.5 x 8.5 inch booklet

# LOCAL FOOD SURVEY OF FLORIDA HOUSEHOLDS



**UF** UNIVERSITY of  
FLORIDA  
IFAS

## Introduction and informed consent statement

This survey is being conducted by the University of Florida to evaluate the characteristics and economic impacts of local food production and marketing in Florida. The survey is being sent to a random sample of households throughout the state. The project is sponsored by the Florida Department of Agriculture and Consumer Services, the University of Florida-Office of Sustainability, and the Alachua County Sustainability Program.

This survey is intended for the person primarily responsible for purchasing food for your household. If you are not the person responsible for food purchases, please pass on the survey to the appropriate person. Respondents must be at least 18 years of age.

If you agree to participate, your identity will remain anonymous, and all information about your responses will be kept strictly confidential. Results of the study will be released to the public only as averages or totals for all survey respondents. Your participation is voluntary; you do not have to answer any question that you do not wish to, and you may stop at any time. The survey will require about 10 minutes to complete.

For any questions about this survey, you may contact the investigator (see below). For questions about your rights as a research participant, contact the University of Florida Institutional Review Board (telephone 352-392-0433).

Thank you for your cooperation!

Sincerely, Alan W. Hodges, Ph.D., Principal Investigator  
University of Florida-Institute of Food and Agricultural Sciences  
Food & Resource Economics Department  
PO Box 110240, Gainesville, FL 32611  
Telephone 352-392-1881 x 312, email [AWHodges@ufl.edu](mailto:AWHodges@ufl.edu) <mailto:406,dmulkey@ifas.ufl.edu>

## General Food Purchasing Patterns

1) How often do you typically shop for food for your household at grocery stores or other retail markets? (choose appropriate interval)

Daily                       Twice weekly  
 Weekly                       Every other week  
 Monthly                       Don't know  
Irregular or other interval: \_\_\_\_\_

2) How much do you typically spend for food for your household on shopping trips to grocery stores? (choose appropriate range)

less than \$50               \$50 to \$99  
 \$100 to \$149               \$150 to \$199  
 \$200 to \$299               \$300 to \$399  
 \$400 or more, specify amount: \$ \_\_\_\_\_  
 Don't know

## Retail Shopping Patterns for Local Food

3) Do you ever purchase food in grocery stores that is labeled as "local" or "locally produced"?

Yes                       No                       Don't know

If answer is "No" or "Don't know" please skip to next section, question 5.

4) What kinds of foods that are labeled as locally produced do you purchase at grocery stores, and what is the average value of these purchases on a typical shopping trip? (check appropriate ranges)

Food Type	Average value of purchases on typical shopping trip					
	Zero (don't purchase)	Less than \$5	\$5 to \$14	\$15 to \$29	\$30 or more	Don't know
Fruits	_____	_____	_____	_____	_____	_____
Vegetables	_____	_____	_____	_____	_____	_____
Nuts	_____	_____	_____	_____	_____	_____
Beef	_____	_____	_____	_____	_____	_____
Poultry	_____	_____	_____	_____	_____	_____
Fish	_____	_____	_____	_____	_____	_____
Pork, lamb, other meats	_____	_____	_____	_____	_____	_____
Eggs	_____	_____	_____	_____	_____	_____
Dairy (milk, cheese, yogurt)	_____	_____	_____	_____	_____	_____
Honey	_____	_____	_____	_____	_____	_____
Beverages (juice, beer, wine)	_____	_____	_____	_____	_____	_____
Prepared foods (baked goods, jams, jellies, etc.)	_____	_____	_____	_____	_____	_____
Other, specify below	_____	_____	_____	_____	_____	_____
Other local foods purchased:	_____					

**Farmer's Markets, Roadside Stands and U-Pick Operations**

5) Do you ever purchase food at local farmer's markets, roadside stands, or U-pick operations?

\_\_\_\_ Yes      \_\_\_\_ No      \_\_\_\_ Don't know

If answer is "No" or "Don't know" skip to next section, question 8.

6) How often do you purchase food at farmer's markets, roadside stands or U-pick operations? (choose appropriate interval)

\_\_\_\_ Daily      \_\_\_\_ Twice weekly      \_\_\_\_ Weekly      \_\_\_\_ Every other week      \_\_\_\_ Monthly  
 \_\_\_\_ Don't know      Irregular or other interval: \_\_\_\_\_

7) What kinds of foods do you purchase at farmer's markets, roadside stands or U-pick operations and what is the average value of these purchases on a typical shopping trip? (check appropriate ranges)

Food Type	Average value of purchases on typical shopping trip					
	Zero (don't purchase)	Less than \$5	\$5 to \$14	\$15 to \$29	\$30 or more	Don't know
Fruits	_____	_____	_____	_____	_____	_____
Vegetables	_____	_____	_____	_____	_____	_____
Nuts	_____	_____	_____	_____	_____	_____
Beef	_____	_____	_____	_____	_____	_____
Poultry	_____	_____	_____	_____	_____	_____
Fish	_____	_____	_____	_____	_____	_____
Pork, lamb, other meats	_____	_____	_____	_____	_____	_____
Eggs	_____	_____	_____	_____	_____	_____
Dairy (milk, cheese, yogurt)	_____	_____	_____	_____	_____	_____
Honey	_____	_____	_____	_____	_____	_____
Beverages (juice, beer, wine)	_____	_____	_____	_____	_____	_____
Prepared foods (baked goods, jams, jellies, etc.)	_____	_____	_____	_____	_____	_____
Other, specify below	_____	_____	_____	_____	_____	_____
Other local foods purchased:	_____					





## Community Supported Agriculture (CSA)

8) Do you belong to a Community Supported Agriculture (CSA) group?

Yes  No  Don't know

If answer is "No" or "Don't know" please skip to next section, question 12.

9) What foods do you receive from the CSA? (check any that apply)

Fruits  Vegetables  
 Meats or fish  Honey  
 Eggs  Dairy (milk, cheese, yogurt)  
 Beverages  Prepared foods  
 Don't know  
 Other food type: \_\_\_\_\_

10) How often do you receive food from the CSA? (check appropriate frequency)

Weekly  Biweekly  
 Monthly  Don't know Other interval, specify: \_\_\_\_\_

11) What is the annual fee that you pay for the CSA subscription, and what is the regular user fee for each food delivery, including any expenses for additional food items purchased? (indicate amount rounded to nearest whole dollar)

Annual subscriber fee: \$ \_\_\_\_\_  Don't know  
 Regular user fee: \$ \_\_\_\_\_  Don't know

## Food Purchased Directly from Local Producers by Arrangement

12) Do you ever purchase food directly from local producers by special arrangement made in advance, aside from purchases or pick-ups made at farmers markets, roadside stands or CSAs?

Yes  No  Don't know

If answer is "No" or "Don't know" skip to next section, question 15.

13) What kinds of foods do you purchase directly from local producers by special arrangement? (check any that apply)

Fruits  Vegetables  
 Nuts  Beef  
 Poultry  Fish  
 Eggs  Pork, lamb, other meats  
 Honey  Dairy (milk, cheese, yogurt)  
 Prepared foods  Beverages (juice, beer, wine)  
 Don't know  
 Other food type: \_\_\_\_\_

14) Approximately how much did you spend for purchases directly from local producers by special arrangement during the past year? (check appropriate range)

Less than \$100  \$100 to \$199  
 \$200 to \$499  Don't know  
 \$500 or more, specify amount: \$ \_\_\_\_\_

## Local Food Purchased at Restaurants

15) Do you ever purchase food items at restaurants or other food service establishments that are advertised as locally produced?

Yes  No  Don't know

If answer is "No" or "don't know" skip to next section, question 18.

**16) What kinds of foods do you purchase at restaurants or other food service establishments that are advertised as locally produced (check any that apply)**

- Fruits and Vegetables
- Meats (beef, poultry, fish, pork, lamb, other)
- Eggs
- Dairy (milk, cheese, yogurt)
- Beverages (juice, beer, wine)
- Prepared foods (baked goods, jams, jellies)
- Don't know
- Other food type(s): \_\_\_\_\_

**17) Approximately how much did you spend for locally produced foods consumed at restaurants during the past year? (check appropriate range)**

- Less than \$100                       \$100 to \$199
- \$200 to \$499                       Don't know
- \$500 or more, specify amount: \$ \_\_\_\_\_

**Consumer Attitudes Toward Local Food**

**18) What do you consider to be the area in which local foods are produced? (check any that apply)**

- Your city or town
- Your county
- Within a radius of 100 miles of your home
- The state of Florida or bordering state
- The southeast U.S. region
- Don't know

**19) What attributes of local foods are important to you? (check importance of each item)**

Attribute	Very Important	Moderately Important	Not Important	Don't Know
Freshness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nutrition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Food safety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Food security	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Organic certified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pesticide-free	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Price	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shelf life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduced transportation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Having relationship to producer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other attribute(s) that are very or moderately important: \_\_\_\_\_

## Barriers to Local Food Systems

20) Which of the following possible factors limit the amount of your purchases of locally produced food? (check appropriate level for each item)

Limiting Factor	Very Limiting	Moderately Limiting	Not Limiting	Don't Know
Unavailability or limited selection of local foods in your area	___	___	___	___
Seasonality (i.e. available only certain times of year)	___	___	___	___
Not knowing whether food is truly local as labeled	___	___	___	___
High price	___	___	___	___
Farmer's market days or times are inconvenient	___	___	___	___
Congestion/parking at farmer's markets	___	___	___	___
Time required for preparation of raw foods	___	___	___	___
Lacking knowledge to prepare local foods	___	___	___	___
Lacking transportation to market locations	___	___	___	___
Lacking storage capacity or refrigeration for large quantity purchases	___	___	___	___

Other factor(s) that are very or moderately limiting: \_\_\_\_\_

## Respondent Information

21) What is your gender?

\_\_\_ Male      \_\_\_ Female

22) What is your age in years? (check appropriate range)

\_\_\_ 18 to 24              \_\_\_ 25 to 44  
 \_\_\_ 45 to 64              \_\_\_ 65 to 84  
 \_\_\_ 85 or greater

23) What was your household income last year? (check appropriate range)

\_\_\_ Less than \$25,000              \_\_\_ \$25,000 to \$49,999  
 \_\_\_ \$50,000 to \$74,999              \_\_\_ \$75,000 to \$99,000  
 \_\_\_ \$100,000 to \$149,000              \_\_\_ \$150,000 or more              \_\_\_ Don't know

24) What was the number of persons residing in your household last year, including yourself? (check appropriate number)

\_\_\_ One                      \_\_\_ Two  
 \_\_\_ Three to Five              \_\_\_ Six or more

25) What is your education attainment? (check appropriate level)

\_\_\_ Primary school (through 9<sup>th</sup> grade)  
 \_\_\_ High school diploma or Graduate Equivalency Degree (GED)  
 \_\_\_ Some college, no degree  
 \_\_\_ College degree (associate's or bachelor's)  
 \_\_\_ Graduate/professional degree  
 Other: \_\_\_\_\_

26) What type of area do you live in? (check appropriate type)

\_\_\_ Large city (population 500,000+)  
 \_\_\_ Medium city (population 100,000 to 499,999)  
 \_\_\_ Small city (population 10,000 to 99,999)  
 \_\_\_ Town (population 1,000 to 9,999)  
 \_\_\_ Rural/unincorporated area

\_\_\_\_ Don't know

**Comments**

27) Please provide any comments you may have about local foods, or how local foods could be made more attractive to you for purchasing greater quantities or more frequently (write in space below).

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**You have completed the survey. Please insert the survey booklet into the postage-paid return envelope provided, and deposit in the mail. Thank you for your c**