

County Snapshot Methodology

The county snapshots were developed for the CONNECT Our Future project to support community efforts to create a sustainable food system in the project region. The local food system information presented in the snapshots offers perspective and context for each county and provides a way for local stakeholders to identify capacity and establish priorities for action.

Each food system variable presented in the snapshots was chosen based on the criteria: (1) data must relate directly to local food system development, (2) data must be obtainable and available to the public, (3) data must come from a reliable, credible source, and (4) collectively, the data must give an idea of the social, economic, and environmental components of the local food system.

The snapshots should be used as a starting point for communities to better understand the dynamics of the food system where they live. The snapshots are concise by design; all counties in the project region are encouraged to investigate the elements of their local food system in greater depth to develop a well-rounded view of the opportunities, assets, and obstacles to food localization efforts in their community.

Production

Farms by size (by gross sales)

Though very large farms produce a majority of the food Americans eat, most of the farms in the nation are smaller farms. In the project region, small family farms earning less than \$250,000 per year dominate. Within this group, 10 percent of small family farms in the region have sales of less than \$100,000 per year, and 17 percent are considered limited-resource farms (any small farms with gross sales less than \$100,000, total farm assets less than \$150,000, and total income less than \$20,000). Another 39 percent of the small family farms are run by operators who report a major occupation other than farming, and another 24 percent report that they are retired. All together, only one percent of the small family farms in the region farm as their primary source of income, are not retired, and earn \$100,000 to \$250,000 per year.

Data Source: Farm typology in the 2007 Census of Agriculture. Small farms are those with sales less than \$250,000 per year and include retirement farms, residential/lifestyle farms, and limited resource. Large family farms are those with annual sales between \$250,000 and \$499,999. Very large family farms are those with annual sales of \$500,000 or more. Non-family farms are farms organized as non-family corporations or cooperatives, as well as farms operated by hired managers.

http://www.agcensus.usda.gov/Publications/2007/Full_Report/

Proportion of farmers younger than 35

The average age of all U.S. farm operators has been greater than 50 years of age since at least the 1974 census. The average age of farmers in each of the counties of the CONNECT Our Future project region is higher than the national average of 57.1 years of age. The question of who will continue to farm as a large number of farmers approach retirement is a pressing issue for each of the counties in the region.

Data Source: Total number of farmers younger than 35 years of age in the 2012 Census of Agriculture.

http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_046_046.pdf

Number of farms and Changes in Farmland Acres

For a local food system to operate effectively, there must be enough farms growing a sufficient quantity and variety of food to support a healthy diet for the local population. While it is *not* assumed that a local food system must supply the entire caloric needs of the local population, there must be a base number of food-producing farms and acres of farmland in the region to supply product to a number of diverse local food outlets (e.g., farmers markets, roadside stands, restaurants, grocery stores, schools, etc.) in order for a local food system to flourish.

Data Source: Total number of farms recorded in the 2012 Census of Agriculture.

http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_001_001.pdf

Data Source: Acres of farmland as recorded in the 2007 and 2012 Census of Agriculture.

http://www.agcensus.usda.gov/Publications/2012/Full_Report/

Proportion of farms reporting positive net income

No matter the infrastructure or enthusiasm a community may have for local food, no local food system is sustainable unless the farmers providing the food are able to make a living. It should be noted that many farmers earn extra income from off-farm jobs that are not reported by the Census of Agriculture. Therefore, it is difficult to determine which farms are actually losing money overall and which farms are financially viable due to tax credits and outside income. Nevertheless, farm income data is a useful way to understand a broad pattern of the financial profile of a region's farms.

Data Source: From the 2012 Census of Agriculture, net cash farm income is derived by subtracting total farm expenses from total sales, government payments, and other farm-related income. Depreciation is not used in the calculation of net cash farm income. Farms with net gains includes those operations that broke even.

http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_004_004.pdf

Proportion of farms with direct sales

Direct markets provide farmers with an easy point of entry into local markets; they build consumer awareness and loyalty, raise the visibility of agriculture, and build demand across a variety of local market segments. Direct markets also have the added potential to increase access to fresh foods for communities with food needs. As a variable in the local food system, changes in the proportion of farms participating in direct sales over time provides insight into the vitality and growth of the local food economy in a region.

Data Source: Direct sales refer to the value of agricultural products sold directly to individuals for human consumption from roadside stands, farmers markets, u-pick, etc. It excludes non-edible products such as nursery crops, cut flowers, and wool but includes livestock sales as reported in the 2012 Census of Agriculture. Sales of agricultural products by vertically integrated operations through their own processing and marketing operations are excluded.

http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_002_002.pdf

Retail Infrastructure

Grocery stores/1,000 pop

Among Americans, grocery stores tend to be the primary source for food purchases intended for at-home consumption. The prevalence of grocery stores per 1,000 individuals in a community indicates the availability of foods for at-home consumption (though not their proximity to specific populations). As individuals become more connected to their food and make food purchasing choices based on decisions beyond price (place of origin, production practices, unique varieties), niche grocery retailers are more likely to be attracted to the area (e.g., Whole Foods, Fresh Market, Trader Joes), and the ratio of grocery store options to residents increases.

Data Source: The number of supermarkets and grocery stores per 1,000 county residents. Grocery stores include establishments generally known as supermarkets and smaller grocery stores primarily engaged in retailing a more specific line of food, such as canned and frozen foods; fresh fruits and vegetables; and fresh and prepared meats, fish, and poultry. Included in this industry are delicatessen-type establishments primarily engaged in retailing a specific line of food. Convenience stores, with or without gasoline sales, are excluded. Large general merchandise stores that also retail food, such as supercenters and warehouse club stores, are excluded. Data is for 2009.

Store data are from the U.S. Census Bureau, County Business Patterns.

<http://www.census.gov/econ/cbp/index.html>.

Population data are from the U.S. Census Bureau, Population Estimates.

<http://www.census.gov/popest/index.html>.

Full service restaurants/1,000 pop

A considerable portion of resident food spending occurs in restaurants, and a high proportion of full service restaurants per 1,000 residents is an indicator of a demand for variety in food options by residents within a community. A high proportion of restaurants to residents within a community can also be an indicator of a dedication to a food-based culture, as well as the availability of business opportunities for both independent restaurant owners and local farmers.

Data Source: The number of full-service restaurants in the county per 1,000 residents. Full-service restaurants include establishments primarily engaged in providing food services to patrons who order and are served while seated (i.e., waiter/waitress service) and pay after eating. These establishments may provide this type of food service to patrons in combination with selling alcoholic beverages, providing take-out services, or presenting live non-theatrical entertainment. The data is for 2009.

Restaurant data are from the U.S. Census Bureau, County Business Patterns.

<http://www.census.gov/econ/cbp/index.html>.

Population data are from the U.S. Census Bureau, Population Estimates.

<http://www.census.gov/popest/index.html>.

SNAP-authorized stores

Supplemental Nutrition Assistance Program (SNAP), formerly known as food stamps, refers to the federal assistance program which helps qualifying low-income individuals and families to purchase food. Since 2002, Electronic Benefits Transfer (EBT) machines have been required to complete all SNAP transactions. SNAP-authorized stores may include grocery stores, supercenters, specialty food stores, and convenience stores. As a variable in a local food system, a count of SNAP-authorized food stores represents both the prevalence of food-insecure populations in a community, as well as the opportunity to provide fresh, local, and healthy options in the locations where low-income families shop.

Data Source: The number of stores in the county authorized to accept SNAP (Supplemental Nutrition Assistance Program, previously called Food Stamp Program) benefits. Stores authorized for SNAP include: supermarkets; large, medium, and small grocery stores and convenience stores; superstores and supercenters; warehouse club stores; specialized food stores (retail bakeries, meat and seafood markets, and produce markets); and meal service providers that serve eligible persons. Store data are from USDA's Food and Nutrition Service, SNAP Benefits Redemption Division for the year 2010.

<http://www.ers.usda.gov/data-products/food-environment-atlas/data-access-and-documentation-downloads.aspx#.UhZkvRtPnvQ>

Farmers markets

The presence of farmers markets in a community indicates both the availability of fresh local food in a community, and an opportunity for community members to connect with where their food comes from and who grows it. Farmers markets also provide economic opportunities for farms who are interested in participating in the local food system. Note: more is not always better, especially with this variable. Number of farmers markets is not synonymous with size or quality, and as with any other business or product, too much supply with too little demand can be just as problematic as too much demand with too little supply.

Data Source: The USDA National Farmers Market Directory, maintained by AMS Marketing Services, is designed to provide members of the public with convenient access to information about U.S. farmers market locations, directions, operating times, product offerings, and accepted forms of payment. Market information included in the Directory is voluntary and self-reported to AMS by market managers, representatives from state farmers market agencies and associations, and other key market personnel.
<http://search.ams.usda.gov/farmersmarkets/#>

Consumption, Access, and Health

Proportion of population with inadequate fruit and vegetable consumption

Local food systems promote fresh farm products that primarily consist of fresh produce and lean meats. As a region begins to embrace a local food system, and as a community begins to shift to favor local foods, the variable of fruit and vegetable consumption should show a positive trend towards increased fruit and vegetable consumption.

Data Source: Data are based on the percentage of respondents who report regularly consuming five or more servings of fruits or vegetables each week. Fried potatoes and chips are excluded. Percentages are age-adjusted and only pertain to the non-institutionalized population aged 18 and up.

Community Commons Community Health Needs Assessment (CHNA) Full Health Indicators Report, as reported from the Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System: 2005-09 and Accessed using the Health Indicators Warehouse.

Rates of diabetes and obesity

The prevalence of food-related illnesses like diabetes and obesity in the population are often used as a proxy measure for the influence of the food environment on community health. A local food system “environment” is characterized by plentiful access to fresh or minimally processed fruits, vegetables, grains, and lean meats. When these types of whole foods become the staples of people’s diets, the prevalence of food-related illness decreases in the population (Henderson et al., 2011 “Health Impact Assessment: Farm to School and School Garden Policy,” HB 2800, Upstream Public Health and the Health Impact Project).

Data Source: The National Diabetes Surveillance system produces data estimating the prevalence of diagnosed diabetes and population obesity by county using data from CDC's Behavioral Risk Factor Surveillance System (BRFSS) and data from the U.S. Census Bureau's Population Estimates Program. The BRFSS is an ongoing, monthly, state-based telephone survey of the adult population. The survey provides state-specific information on behavioral risk factors and preventive health practices. Respondents were considered to have diabetes if they responded "yes" to the question, "Has a doctor ever told you that you have diabetes?" Women who indicated that they only had diabetes during pregnancy were not considered to have diabetes. Respondents were considered obese if their body mass index was 30 or greater. Body mass index (weight [kg]/height [m]²) was derived from self-report of height and weight.

http://apps.nccd.cdc.gov/DDT_STRS2/CountyPrevalenceData.aspx?mode=OBS

Proportion of children eligible for free/reduced price lunch

Research shows a positive correlation between low income status and lower consumption of fruits and vegetables (Horodynski et al., 2010 "Low-income African American and Non-Hispanic White mothers' self-efficacy, "picky eater" perception, and toddler fruit and vegetable consumption"). The variable of the percentage of children eligible for free/reduced price lunch in school cafeterias serves a dual purpose of identifying the proportion of families in a community that may not be consuming adequate amounts of fruits and vegetables, and also supplying an opportunity for local food advocates. School cafeterias provide up to two meals per day for needy students. Communities can impact the individual health of this portion of the population by ensuring these meals are replete with healthy, fresh, local foods.

Data Source: Total student counts and counts for students eligible for free and reduced price lunches are acquired for the school year 2009-2010 from the NCES Common Core of Data Public School Universe Survey.

Community Commons Community Health Needs Assessment (CHNA) Full Health Indicators Report, as reported in the National Center for Education Statistics, Common Core of Data: 2010-11.

Waste Management

Estimated annual tons of residential food waste, commercial food waste (ICI), and municipal solid waste (MSW)

Waste management, and food waste management in particular, is a key component of a community's food system. Significant amounts of food waste can be diverted from disposal in landfills by recovering foods that are fit for human and animal consumption from the waste stream, and composting and recycling inedible food waste to the extent possible. As population growth leads to increased pressures on agricultural land and other resources, a sustainable system of waste management can help a community to make better use of its

natural resources, reduce its environmental impacts, provide financial savings and entrepreneurship opportunities throughout the food supply chain, and enhance its ability to meet food demand.

Data Source: North Carolina 2012 Food Waste Generation Study used three methods to quantify food waste in North Carolina: (1) share of population using state waste characterization reports, (2) share of generators using direct studies, and (3) EPA-provided percentages.

North Carolina Department of Environment and Natural Resources (2012) North Carolina Food Waste Generation Study.

http://portal.ncdenr.org/c/document_library/get_file?uuid=ae965d91-c5a1-47aa-8f09-9afb6a6598f&groupId=38322

Data Source: Tons of waste received by South Carolina composting facilities in fiscal year 2012. Templeton, Catherine (2013) South Carolina Solid Waste Management Annual Report. DHEC's Division of Mining & Solid Waste Management.

<http://www.scdhec.gov/administration/library/CR-010906.pdf>

Equity

Wages throughout the food system sectors

According to the United States Bureau of Labor Statistics, six in ten workers earning the minimum wage or less in 2011 were employed in service occupations, primarily in food preparation and food serving. According to a 2012 report from the U.S. Department of Labor, the lowest paying major occupational group in the country are food preparation and serving related occupations.¹ In addition to low wages, food system jobs consistently rank poorly in terms of their physical demands on workers, work environment, hiring outlook, and worker stress levels. An equitable food system should operate in a just manner from producer to consumer. This includes decent treatment of workers, safe working conditions, and living wages. For the snapshots, the variable of worker wages was chosen as it is a readily available, quantified discrete value that is easily compared and analyzed.

Data Source: These estimates are calculated with data collected from employers in all industry sectors in Charlotte-Gastonia-Rock Hill, NC-SC, a metropolitan statistical area that includes parts of North Carolina and South Carolina. Wages for the OES survey are straight-time, gross pay including base rate; cost-of-living allowances; guaranteed pay; hazardous-duty pay; incentive pay, including commissions and production bonuses; and tips. Excluded are premium pay; overtime pay; severance pay; shift differentials; nonproduction bonuses; employer cost for supplementary benefits; and tuition reimbursements. OES receives wage rate data for the federal government, the U.S. Postal Service, and some state governments. For the remaining establishments, the OES survey collects wage data in 12 intervals. For each occupation, respondents are asked to report the number of employees paid within specific wage intervals. The intervals are defined

¹ United States Bureau of Labor Statistics (2012) Occupational Employment and Wages Summary. Press Release May 2012. <http://www.bls.gov/news.release/ocwage.nr0.htm>

both as hourly rates and the corresponding annual rates, where the annual rate for an occupation is calculated by multiplying the hourly wage rate by a typical work year of 2,080 hours. The responding establishments are instructed to report the hourly rate for part-time workers, and to report annual rates for occupations that are typically paid at an annual rate but do not work 2,080 hours per year, such as teachers, pilots, and flight attendants. Bureau of Labor Statistics Occupational Employment Statistics: May 2012 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates. http://www.bls.gov/oes/current/oes_16740.htm#35-0000

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