

CENTER *for* ENVIRONMENTAL FARMING SYSTEMS

Cabarrus County Food System Assessment

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CABARRUS COUNTY FOOD SYSTEM ASSESSMENT

Executive Summary and Recommendations

The Cabarrus Board of Commissioners has made it a priority to establish Cabarrus County as a sustainable community, one that meets present needs without compromising the ability of future generations to meet their needs. Commissioners agree a local food system that fosters local production, processing, distribution, and consumption of food in Cabarrus County is at the heart of a sustainable community.

In 2010, the County hired the Center for Environmental Farming Systems (CEFS) to conduct a Food System Assessment to: 1) provide an initial evaluation of the food system in the County, 2) highlight assets and challenges within different segments of the food system, and 3) make recommendations for action. This assessment, summarized below, identifies key findings and recommendations derived from secondary data sources and interviews with over 60 different stakeholders involved in the County's food system.

PRODUCTION

Cabarrus County has a strong agricultural heritage from which to build and strengthen its local food system. While agriculture is one of the County's largest industries, farms and farmland are rapidly disappearing due to a host of factors, including an aging farming population, increased production costs, and rapid population growth. The County recognizes this trend and has made agriculture a priority in guiding its long-range planning and land-use decisions.

Almost all farms in the County are locally owned, and the majority are relatively small, with over half fewer than 50 acres. Only one-third of farmers in the County report that farming is their primary occupation, and thus a large percentage of farms can be characterized as either retirement or lifestyle farms.

The County's strength is in livestock production, particularly beef; half the County's farms have cattle and calves. In contrast, fruit and vegetable production comprises a very small portion of the agricultural industry in the County, with only 24 farms working 86 acres. The County's soils and climate are considered

adequate, but not ideal, for vegetable production and access to sufficient water and irrigation is and will continue to be a challenge throughout the County.

PROCESSING

Throughout the 20th century Cabarrus County was dominated by the textile industry, which means few investments were made in infrastructure to support agriculture. Today there are no produce processing facilities in the County, and farmers don't have ready access, within the county or the region, to facilities that wash, cut, store, transport, freeze, can or in other ways process and add value to fruits and vegetables.

In contrast, the County is home to Cruse Meats, which has provided meat fabrication (e.g., cutting, wrapping, and labeling) services for area farmers for many years. What has been missing is nearby slaughter capacity. The County has been working for the past two years to remedy this and will soon begin construction on a kill floor at Cruse Meats.

Cabarrus County has a strong agricultural heritage from which to build and strengthen its local food system.

MARKET CHANNELS

Local and regional marketing opportunities are largely untapped, including both through direct and wholesale channels. The County's proximity to Mecklenburg County, home to the city of Charlotte, positions it well geographically for accessing a large number of potential markets.

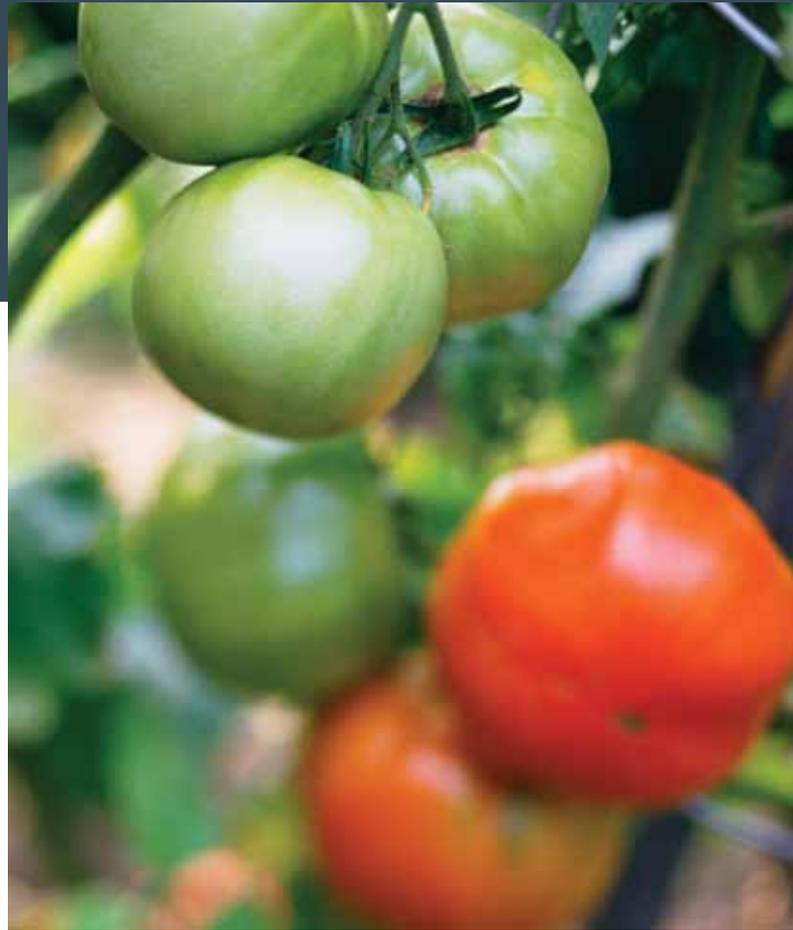
Direct-to-Consumer: Cabarrus has 37 farmers who sell directly to consumers and their sales totaled \$90,000 in 2007. The Piedmont Farmers Market operates five markets in four locations, and sales are generally not considered strong.

Wholesale Distributors: There are several wholesale buyers in the area who provide important potential markets for County farmers, including Sysco Foods Source Verified Beef Program and Albert's Organics.

Wholesale Food Service: Chain restaurants are less likely to source local ingredients, whereas higher end restaurants that are independently owned are increasingly sourcing local. The definition of local varies from chef to chef and includes within 50-100 miles, as well as the entire state. In addition, the County itself feeds a lot of residents through its institutional programs, including the Department of Aging, County Schools, and the County Jail, all of which contract with broad line distributors.

Wholesale Retail: Today, Cabarrus has 29 retail grocery stores. In the 1990s, Cabarrus County was home to a successful independent and locally owned grocery, Dover Supermarket, which had three locations as of 1998. Large grocery chains currently dominate the market in both Cabarrus and Mecklenburg Counties. Fresh Market and Earth Fare, two smaller chains with multiple stores in the Southeast, have locations in Charlotte.

Emergency: Cabarrus County has nine food pantries and fresh produce is in high demand. The majority of what is moved through this market channel is non-perishable, except for what is gleaned from farmers' fields. Three Cabarrus farms are gleaned during 11 months of the year. Lack of refrigerated storage space, as well as suitable trucks and drivers, are all deterrents to using locally-sourced gleaned produce.



INTERVIEWS WITH STAKEHOLDERS

Farmers in the County who are successfully selling locally are engaged in direct-to-consumer sales and at this juncture would prefer to continue this focus. They are not necessarily interested in scaling-up production or undergoing the certification requirements of most wholesale buyers. They do not believe they have sufficient infrastructure or product volume to satisfy wholesale buyers. Furthermore, many of them enjoy direct marketing and understand it to be more profitable than wholesale production. There is a lot of interest in: 1) increasing consumer awareness of locally-grown food and 2) expanding CSAs and food-buying clubs for both produce and meat.

Restaurants, both in the County and the Charlotte/Mecklenburg area, present a host of challenges for scaling sales of local meat and produce. Most restaurants interested in sourcing local are independently owned, upscale establishments. While some prefer local produce because of its quality, most chefs will not become regular buyers unless the price is right and the products they are interested in are available in the volume and consistency they need. Those chefs and restaurant owners currently sourcing locally are doing so based on strong relationships with individual farmers.

Some of the County's **institutional buyers** are sourcing

N.C. grown produce, including the County Schools, which participate in the N.C. Farm to School Program. In 2010, the County joined the CEFS 10% Campaign and adopted a Local Food Purchasing Policy that requires County employees to locally source 10 percent of all food served at County catered events and meetings. This offers an immediate opportunity to expand local procurement. In short, while institutions are big food purchasers, Cabarrus farmers are not currently producing enough to supply these markets. Beef has more potential compared to produce but is still a long-term, complex issue.

Large chains dominate the County's **retail grocery stores**, including Food Lion, Harris Teeter and Lowes Foods. Through its participation in "Got to be NC," Food Lion identifies NC farms that provide products to the store. In general, retail buyers purchase products on a large scale and require third-party certification, which makes smaller-scale farmers less interested. Independently owned grocery stores are ideal markets for small-scale independent farmers. Yet in order to be successful, these stores need distributors who are willing to make deliveries scaled to their smaller size. A few independent stores exist outside the County, and they are beginning to see increased demand for locally-raised meats.

RECOMMENDATIONS

We provide the following overarching recommendations as guidance for the County in determining priority activities with the intent to help optimize the use of resources — natural, human and financial — in building a local food economy. These recommendations stem in large part from the outcome of interviews and focus groups with local food system stakeholders.

1. Engage in a county-wide strategic planning and visioning process — This assessment provides background information and characterizes the County's food system as it is today. It identifies numerous challenges and opportunities for making progress. To move forward, the County should consider engaging in a strategic planning process that considers the information compiled in this assessment and builds on it to establish targeted goals, time-lines and priority actions. Any relevant work undertaken by the Food Policy Council should be incorporated as well. As part of the strategic planning process, successful local food initiatives within the County and across the region should be highlighted, including regional and national models for scaling local food and farming businesses. (We provide a variety of examples within the assessment).

2. Provide "food system training" opportunities for County decision makers — While there continues to be significant interest in local food as an economic driver at the County level, individuals within leadership positions need

opportunities to become well versed in food system issues and support their ready engagement in key activities.

3. "Grow" more farmers — There is a very real need and opportunity to support the growth of more farmers — particularly produce farmers — and productive farmland in the County and region as a whole. Without a stronger producer population, it will be difficult to expand local food access and grow the local food economy. Achieving this goal requires multiple strategies and is a long-term effort. Continued development of producer support systems will be critical. This includes ensuring strong and active engagement with Extension and creating the opportunity for this key partner to expand its support for this sector.

4. Focus in the near term on direct-to-consumer market channels — Farmers in Cabarrus appear most interested in developing direct-to-consumer market outlets. Direct-to-consumer options offer farmers the greatest financial return. And, as buyers, consumers interested in local food are far more forgiving and willing to pay premiums for food than typical wholesale buyers, including chefs and retailer grocers. Cabarrus is in the early stages of developing its local food economy and there appears to be plenty of "room" in the market place to cultivate prosperous and plentiful direct producer-to-consumer connections. Of particular interest to producers are "micro-aggregation" projects — locally-led businesses and/or initiatives that build efficiencies into direct-to-consumer relationships, such as through CSA's and food buying clubs.

5. Support farmers in understanding and tackling wholesale markets — The producers we interviewed expressed numerous concerns about and a lack of familiarity with wholesale markets. It will be important to provide hands-on training opportunities to help producers understand and comply with the demands of these markets. This includes a focus on opportunities to aggregate product to achieve volume and year-round availability, development of shared transportation, strategies for achieving GAP certification, storage, processing and other needed infrastructure, etc...

6. Invest in consumer education and promotion — Individuals in Cabarrus County have expertise and resources in marketing that many farmers do not. Focusing these talents on generating demand for local food is critical at this stage and is already underway, as shown by the Food Policy Council's "Locally Grown" Local Food Logo. Chefs, food service buyers, and retail grocers must feel consistent pressure from their customers before they'll go out of their

way to adopt local sourcing practices that are often more expensive and less convenient. Many options are available here, including widespread promotion of the “*Locally Grown*” label and a continued partnership with the Center For environmental Farming Systems’ (CEFS) 10% Campaign.

7. Bolster “Cruse Slaughter Floor” investment with intensive development of meat suppliers and market outlets

— The County has made significant in-roads toward the development of the Cruse Slaughter Floor. Many factors will determine the success of this project. Typically, significant “through put” is required to make these types of food system infrastructure improvements financially viable. For the facility to succeed, it will be necessary to develop a reliable source of animals to move through the facility plus strong markets and demand. Both of these elements are not yet evident in Cabarrus’ beef producer or consumer

community. Given individual farmer’s lack of interest in wholesale markets, it would be prudent to pursue this project in tandem with the development of one or more producer collaborations and/or food entrepreneurs who can develop a wholesale aggregation program that focuses on volume. It would also be strategic to focus County resources directly on local beef promotion.

8. Investigate and encourage participation in regional marketing initiatives

— The County is in a strong position to play a leadership role in developing regional approaches to building local food businesses and initiatives focused on scaling. A first priority should be continued investigation of regional and national models for scaling local food and farming businesses, including consumer cooperatives. A number of initiatives are underway in the Charlotte/Mecklenburg area that offer opportunities for collaboration.



CABARRUS COUNTY FOOD SYSTEM ASSESSMENT

Goals, Components and Methodology

CONTEXT AND GOALS

Food touches the life of every Cabarrus County citizen. By looking at issues of public concern, such as unemployment, urban sprawl, chronic disease, carbon emissions, and food safety, through a “food lens” we can understand ways in which the food system impacts communities, including the areas of public health, natural resource protection, economic development and agriculture.

Across North Carolina local governments are examining food systems with an eye toward making them more local and sustainable. By definition, sustainable food systems are integrated to enhance the economic, environmental, social and nutritional health of a particular place.

In its state action guide, *From Farm to Fork: A Guide to Building North Carolina’s Sustainable Local Food Economy*, the Center for Environmental Farming Systems (CEFS) identifies the many benefits these systems offer to N.C. communities. Examples include increased economic activity at the community level — which leads to job opportunities — greater food safety and security, and improved health outcomes. Viable local food systems can also harness consumer spending to support N.C. producers.

The Cabarrus Board of Commissioners has made it a priority to establish the County as a sustainable community, one that meets present needs without compromising the ability of future generations to meet their needs. Commissioners agree a local food system that fosters local production, processing, distribution, and consumption of food in Cabarrus County is at the heart of a sustainable community. A food system assessment can provide a valuable strategic planning tool that highlights the connections between food, health, natural resource protection, economic development and agriculture.

The purpose of Cabarrus County Food System Assessment is two-fold. First, it provides an initial evaluation of the food system in Cabarrus County and, where appropriate, the surrounding region. Second, it

highlights the assets and challenges within different food system segments, so strategies can be identified for building the County’s local, sustainable food system. This includes identifying opportunities for economic growth within the County’s food economy and increasing consumer access to locally grown and raised foods.

The Cabarrus Commissioners have appointed a 21-member Food Policy Council to identify and strengthen connections between food, health, natural resources protection, economic development and the agricultural community. This food system assessment will serve as a planning tool for the Council, one that will empower them to develop strategies and make policy recommendations that stimulate a robust sustainable food economy.

Numerous North Carolinians are working toward similar goals. More than 1,000 participated in the CEFS Farm to Fork initiative, “Building a Sustainable Local Food Economy in North Carolina,” which was designed to promote collaboration, identify best practices and develop actions at the state and local level that will foster a statewide sustainable food system. In its state action guide, included in the statewide and local recommendations for action, CEFS identifies baseline food system assessments as a tool for engaging decision makers in strategic food systems planning. The Cabarrus County food system assessment can serve as a model for other communities interested in joining the statewide effort to build local sustainable food systems.

FOOD SYSTEM COMPONENTS

A food system encompasses the cycle of producing, distributing, eating and recycling food, and it is made up of all the processes used to feed people: growing, harvesting, processing, packaging, distributing, marketing, consuming, disposing and recycling. The core components of the system are described below. In this assessment the focus will be on system activities at the county and, where appropriate, regional level. The scope of the study will cover the core components of the food system in relation to the assessment goals outlined above.

Production

The cultivation of edible plants and domestication of animals, including rural and urban farms as well as community or school gardens, rooftop gardens, urban and rural greenhouses, edible landscaping, backyard gardening and others.

Processing

All the processes that add value to and/or transform raw commodities into food products, including baking, cooking, freezing, canning, and packaging. Examples of business enterprises include bakeries, commercial kitchens, and meat packers.

Distribution and Marketing

All activities related to getting raw and processed foods to consumers, including transporting, storing, and retailing. This includes four major market channels:

1. Direct (farmers’ markets, food-buying clubs, Community Supported Agriculture)
2. Retail (grocery stores)
3. Food service (restaurants and institutions)
4. Emergency (food banks)

Consumption

All the activities and processes that individuals, society and culture engage in to acquire (e.g. purchase, strategize, manage, ingest, digest) and use (e.g. cook, ritualize, present) food that has been produced and distributed. This includes home kitchens.

Waste Management

The series of activities where discarded food materials are collected, sorted, processed and converted into other materials and used in the production of new products. This includes backyard composting, large-scale composting, edible food waste recovery, recycling, and land filling.

This assessment can serve as a model for other communities interested in joining the statewide effort to build local sustainable food systems.

ASSESSMENT METHODOLOGY

Food system assessments have been used across the country to analyze community concerns related to food. The methodology used in this study is based on previously conducted assessments. Those reviewed include *A Food Systems Assessment For Oakland, Ca: Toward A Sustainable Food Plan*, 2006; *Sowing the Seeds: The Promise of Local Food Systems in Southeast Central North Carolina*, 2008; *Growing Local: Expanding the Western North Carolina Food and Farm Economy*, 2007; and *Local food System Assessment for Northern Virginia*, 2010.

We designed this assessment to provide baseline data related to different segments of the system and how they function. The assessment was conducted in two phases. Phase I presented an overview of agricultural production in Cabarrus County as provided by a review of secondary data sources. Key findings from Phase I are summarized in Progress Report: Summary of Phase I Research, which was presented to the Cabarrus Board of County Commissioners in October 2010.

Phase II of the Food System Assessment characterizes and synthesizes the opportunities and challenges identified by different stakeholders in Cabarrus County's food system, including farmers and food buyers within three distinct market channels: direct-to-consumer, retail, and food-service/institutional. Data across segments of the food system was collected through a combination of focus groups and individual interviews. Information related to vegetable and beef production is included, and consumption data is included as available. An effort was also made to collect information

related to existing infrastructure and the County's capacity to support processing, distribution and marketing of locally grown and raised foods.

Altogether, 62 food system stakeholders were interviewed. Almost all were recommended by the County for participation. The list includes 14 producers, four individuals from the food processing sector, four working in food distribution, three engaged in serving direct markets, nine people working in restaurants, eight involved with County institutions, six from the retail/grocery market channel, four involved in emergency food assistance, three from Cabarrus cooperative extension, and seven consumers. Some stakeholders, including food processing and distribution businesses and large-scale grocery stores, are not well represented because they were difficult to engage despite repeated outreach efforts.

This report includes overarching recommendations as guidance for County-wide decision making as well as targeted recommendations related to specific aspects of building the local food economy. Throughout, the issue of market access received special attention. To build a local food system, local farmers need access to markets. Ideally, they will be able to sell their products through more than one market channel, including retail, food-service, and direct-to-consumer. As the interviews summarized here show, each market channel offers different opportunities and challenges. Each presents unique requirements for producers, who need different resources to access different markets.



photo: Lisa Forehand

PRODUCTION CHARACTERISTICS

Agriculture impacts Cabarrus County’s economy —

In the 2006 *Countywide Farmland Protection Plan for Cabarrus County, North Carolina*, agriculture was ranked as the County’s second largest industry by gross sales. Census data reveals that as of 2007, agriculture was still making a significant impact on the Cabarrus economy. The total market value of agricultural products sold from Cabarrus was \$52,394,000 that year — a 71% increase over the 2002 — with the average value of goods sold per farm of \$85,752.¹

Farmers spent \$45,219,000 to produce these goods, with an average expense of \$74,008 per farm, compared to \$36,271 spent per farm in 2002.² Seed, fertilizer, feed and fuel expenses all increased between 2002 and 2007, while labor expenses decreased.³

TABLE 1. CABARRUS FARM INCOME

	2002	2007	Percent Change
Market Value of Goods Sold	\$30,573,000	\$52,394,000	+71
<i>Avg Per Farm</i>	\$46,464	\$85,752	+85
Government Payments	\$476,000	\$675,000	+42
<i>Avg Per Farm</i>	\$3,575	\$6,305	+76
Farm-related Income	\$950,000	\$1,221,000	+29
<i>Avg Per Farm</i>	\$6,932	\$9,047	+31
Production Expenses	\$23,830,000	\$45,219,000	+90
<i>Avg Per Farm</i>	\$36,271	\$74,008	+104
Net Farm Income	\$7,210,000	\$9,072,000	+26
<i>Avg Per Farm</i>	\$10,974	\$14,847	+35

Livestock production dominates — In 2007 livestock sales accounted for 86% of the market value of agricultural goods sold throughout the County. The remaining 14% was made up by crop sales (including greenhouse and nursery). Fruits and vegetables, including melons, potatoes and sweet potatoes, make up a very small portion of the agricultural economy, representing only \$332,000 in sales market value.⁴

The top three commodities by sales value were poultry and eggs, cattle and calves, and nursery products, which include floriculture and nursery crops, as well as greenhouse fruits and vegetables. Grains; hogs and pigs; and milk and dairy products follow respectively.⁵

Fruit and vegetable production is minimal — In 2007 24 Cabarrus farms harvested 86 acres of vegetables. While the number of farms growing vegetables increased by 100% between 2002 and 2007, fruit and vegetable production remains limited in both quantity and variety. For example, 70 of the 86 acres were devoted to sweet corn, pumpkins, tomatoes and watermelons.⁶ Twenty-four farms have land in orchards that totals 66 acres.⁷

Cabarrus County has a strong agricultural heritage from which to build and strengthen its local food system.

Issues to be explored

The County's strength in livestock production provides a crucial foundation for economic growth and signals an opportunity to supply meat and meat products to the County and surrounding region.

While produce production is minimal, the County's farms are beginning to diversify. This is evident by the increase in vegetable farms and acreage devoted to vegetable harvest, plus the opening of the Elma C. Lomax Incubator Farm. Diversity is needed to increase the supply of locally-grown produce available for Cabarrus citizens. The County will need more produce farmers — either new farmers or farmers willing to make this transition — in order to strengthen its food system and provide fresh, healthy foods.



photo: Mike Linker

FARMING POPULATION

Aging farmer population — In 2002, there were 946 farmers in the County, working on 611 farms, with an average age of 57.9. In 2007, a total of 893 farmers worked in the County, and the average age of farmers was 57.4.⁸ Although it is encouraging to see that the average age of farmers lowered slightly over five years, Cabarrus County continues to face a challenge that is all too common across North Carolina: farmers are aging, and few young farmers are ready to take their place. With the average farmer over 55, the next 10-15 years will be a time of transition as farms and their assets potentially come under new ownership — a change that could make Cabarrus farmland acutely vulnerable to development pressure.⁹ Another concern is that the farming skills needed to manage farmland and grow and raise food will be lost. Many of these skills have been passed down through generations, and it will take time to develop new farmers.

Farmers face financial pressures — The 2007 USDA Census reports that only 222, or 36%, of Cabarrus farm operators list farming as their primary occupation — a significant decrease from the 53% of Cabarrus farmers who reported the same in 2002.¹⁰ Compare the 2007 figure (36%) to the 46% of North Carolina farmers who reported farming as their primary occupation during the same year, and it is even more noteworthy.¹¹

In 2007 46% of Cabarrus farmers worked more than 200 days off the farm, compared to 36% in 2002.¹² Although our existing agricultural system is designed to incorporate mechanization and pesticide use to give farmers some freedom to work off farm, an increase in farmers working off-farm often points to an increased need for supplemental income from off-farm employment.

Net farm income in Cabarrus increased by 26%, rising from \$7.21 million to \$9.07 million with average income per farm

rising 35%, from \$10,974 to \$14,847.¹³ In comparison, North Carolina's 2007 net farm income totaled \$2.4 billion — with an average income per farm of \$45,532 across the state.¹⁴

Increase in female farmers — The majority of Cabarrus farmers are white men and women who serve as decision makers on 592 farms.¹⁵ Between 2002 and 2007, the number of women working as the principal operators on Cabarrus farms increased by 31%.¹⁶

Local ownership a strength — As was true in 2002, Cabarrus boasts strong local ownership of its farms. Almost all (550 or 90%) Cabarrus farms are family farm operations. Four hundred and thirty farmers are full owners, which means they own the land they farm, while 146 are part owners and 35 are tenant farmers.¹⁷ Twenty Cabarrus farms produced commodities under production contracts, with 12 of those producing broilers or pullets.¹⁸

Local farm ownership can be considered the keystone of sustainable communities. Farmers who own the farms they operate can provide numerous benefits. They are more likely to participate in the local economy and take care of the land and surrounding environment for future generations. They also provide the human capital society needs to feed itself.¹⁹



photo: Mike Linker

Issues to be explored

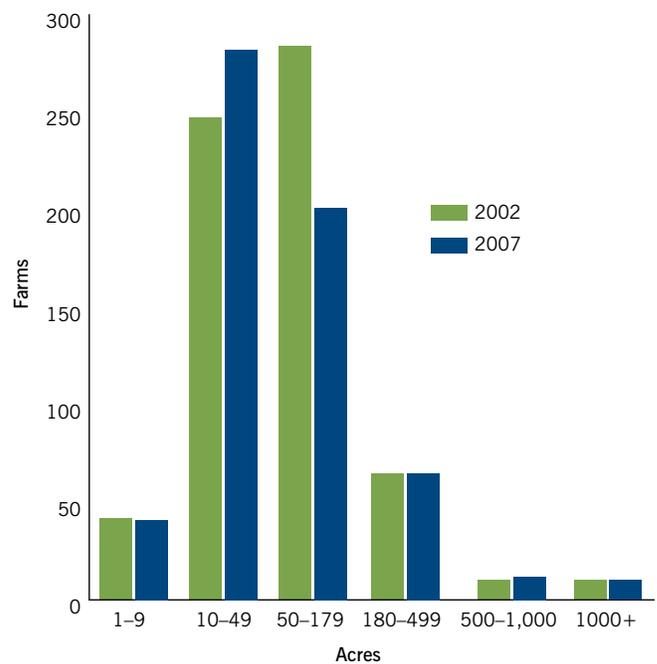
To build its local food system, Cabarrus needs to encourage new farmers to enter farming as a career and to keep existing farms in business. In particular, the County needs to support the growth of small and mid-scale farms. One way to achieve this goal is to make sure farming is a viable career path, one that allows farmers access to training, capital, disaster relief programs, and disability and health insurance.

FARM SIZE AND CHARACTERISTICS

Overall market sales increase — As reported above, the total market value of agricultural goods sold in the County increased between 2002 and 2007 by 71%. When looking at the total market value of products sold by farm, the number of farms selling between \$20,000–\$49,999 increased from 31 to 40 (29%). The number of farms selling between both \$50,000–\$99,999 and \$100,000–\$249,999 increased as well (by 27% and 44% respectively), and the number of farms selling more than \$500,000 increased by 58%.²⁰

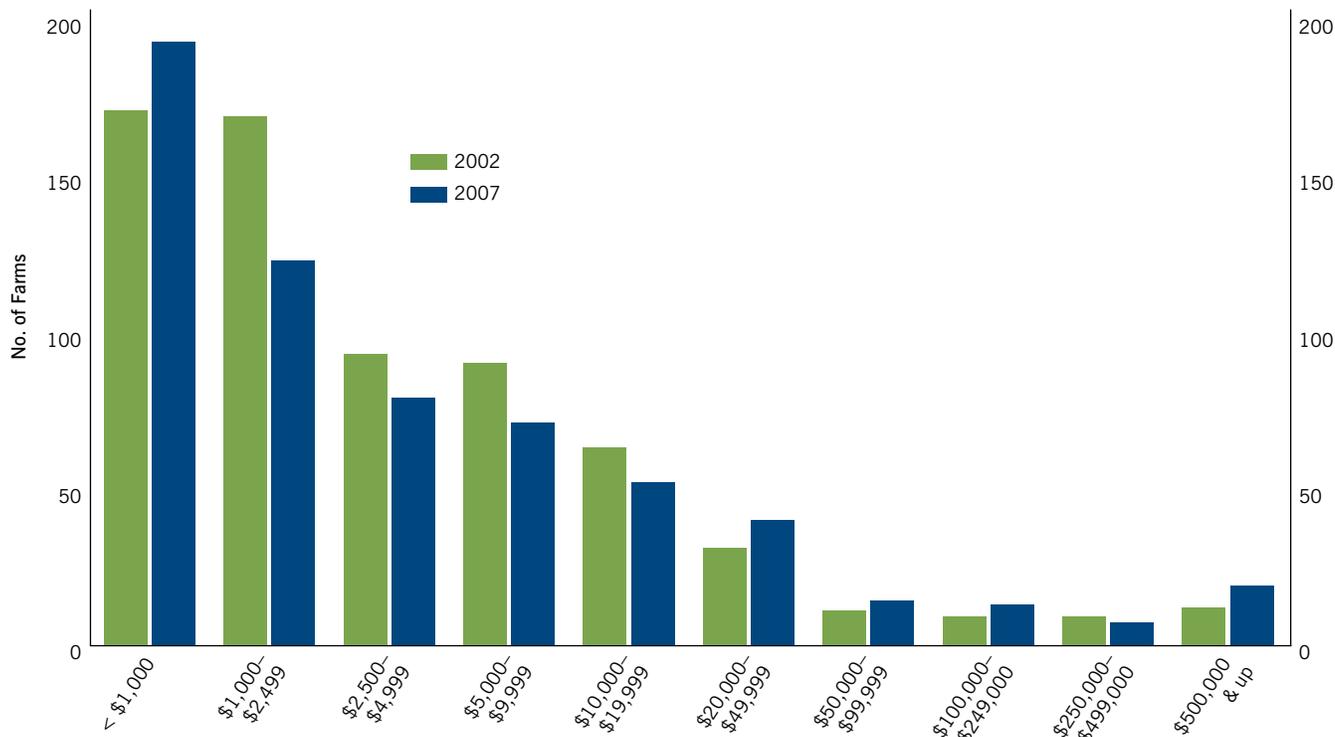
Small acreage and lifestyle farms are on the rise — According to the 2007 USDA Census, the average Cabarrus farm size was 109 acres, and 53% of the County's 611 farms were less than 50 acres. Compared to 2002, the number of farms between 1–9 acres stayed relatively the same, while the number of farms between 10–49 acres increased (from 247 to 282).²¹

GRAPH 1. CABARRUS FARMS BY SIZE



When looking at the total market value of products sold by farm, the number of farms selling less than \$1,000 increased from 171 to 193 (13%) between 2002 to 2007.²² This category includes farms that can be considered lifestyle farms — those maintained without expectation of being a primary source of income — as well as farms with the potential to combine sales and government payments for a total greater than \$1,000.

GRAPH 2. FARMS AND MARKET SALES



Few farms are “major occupation farms” — The USDA uses sales information to delineate between large and small family farms. Family-owned farms are considered large if they report sales over \$250,000. The USDA classifies small farms according to the following typology:²³

Limited resource farms: Small farms with sales less than \$100,000 and household income either below poverty level or half the county median income.

Retirement farms: Small farms whose operators report they are retired. Residential/lifestyle farms. Small farms whose operators report they had a major occupation other than farming.

Farming occupation/low-sales farms: Small farms with sales less than \$100,000 whose operators report farming as their major occupation.

Farming occupation/high-sales farms: Small farms with sales between \$100,000 and \$249,999 whose operators report farming as their major occupation.

In 2007, only 64 Cabarrus farms (approximately 10%) reported being major occupation farms, while 399 farms reported being either retirement or residential farms.²⁴

Market forces challenge mid-sized farms — From 2002 to 2007, our state lost 1,181 farms between 50-179 acres, more than in any other category. CEFS has identified the loss of mid-sized farms as a pressing problem for the entire state. Although this is not the trend in Cabarrus County — indeed the number of mid-scale farms increased by 44% between 2002 and 2007 — few mid-scale farms exist. In 2007, only 13 farms of the County’s 611 farms reported market sales between \$100,000 and \$250,000.²⁷

In 2003 a national task force — including representation from North Carolina — was formed to revive America’s intermediate farms, defined as those farms reporting sales between \$100,000 and \$250,000 where farming is the owner’s primary occupation.²⁸

These farms fall into what is called the “agriculture of the middle.” The term refers to a disappearing sector of mid-scale farms/ranches and related food enterprises that can neither market bulk commodities successfully, nor sell food directly to consumers. These mid-sized farms are vulnerable in today’s polarized markets because they are too small to compete in the highly-consolidated, vertically integrated supply chains and too large and commodity-centered to sell in direct markets.²⁹

Yet their size positions them to take advantage of a unique market opportunity. It allows them to be innovative and flexible enough to respond to the growing demand for food

produced in accordance with sustainable agriculture standards. It also allows them to sell into wholesale markets and to provide the volume that wholesale buyers are increasingly seeking from local producers.³⁰

Cabarrus includes farms that cover a broad range of acreage — A majority of farms — 86% — are less than 180 acres in size.³¹ These small and mid-sized farms have potential to make the biggest contribution to the local food system. Smaller farms are better-suited to direct market sales, and mid-sized farms can potentially provide larger volume of products (and thus reach a larger number of consumers) necessary to service larger-scale markets, including grocery stores and institutions, such as prisons, medical centers and schools, where county government allocates funds for food service budgets.

Issues to be explored

For small and mid-sized farms to function efficiently, they need infrastructure that is scaled to meet their needs, meaning it is both appropriate for the volume they produce and located nearby, so they can avoid the cost associated with driving long distances to use it.

In its state action guide, CEFS defines food system infrastructure as the physical capacity to get food from the farm to the market. It also includes the businesses that connect farmers to markets. Food system infrastructure facilitates the creation of products that extend the marketing window and

shelf-life of seasonally produced foods at the same time it adds value to farmers' raw products. Farmers need cold storage and transportation; value-added processing centers; facilities for grading, aggregation and packaging; community kitchens; dairy processing facilities; and grain milling in order to get their sustainably-produced food to consumers.

ECONOMIC OPPORTUNITY

Beef is the primary commodity — The 2007 USDA Census reports 306 farms — half the County's farms — have cattle and calves in inventory. In 2007, 259 farms sold 7,237 cattle and calves for a total of \$4.47 million, ranking second in market sales value for the County.³²

Of the 306 farms with cattle, 93 farms have between 1-9 animals. A total of 283 farms (92%) have fewer than 100 animals, with 88 farms having between 20-49 animals, and 25 farms having between 50-99 animals. Eleven Cabarrus farms have more than 200 animals in inventory. (See Graph 3, next page). As of January 1, 2010, Cabarrus ranked 21st in the state in beef cattle inventory, with 6,400 beef cattle in inventory.³³

Cow/calf operations dominate — As in much of North Carolina, cattle farms generally fall into one of two categories. Cow/calf operations sell animals weighing between 400-600 lbs. at livestock auctions, where they will be bought and taken to feedlots. County Extension Director Debbie Bost estimates

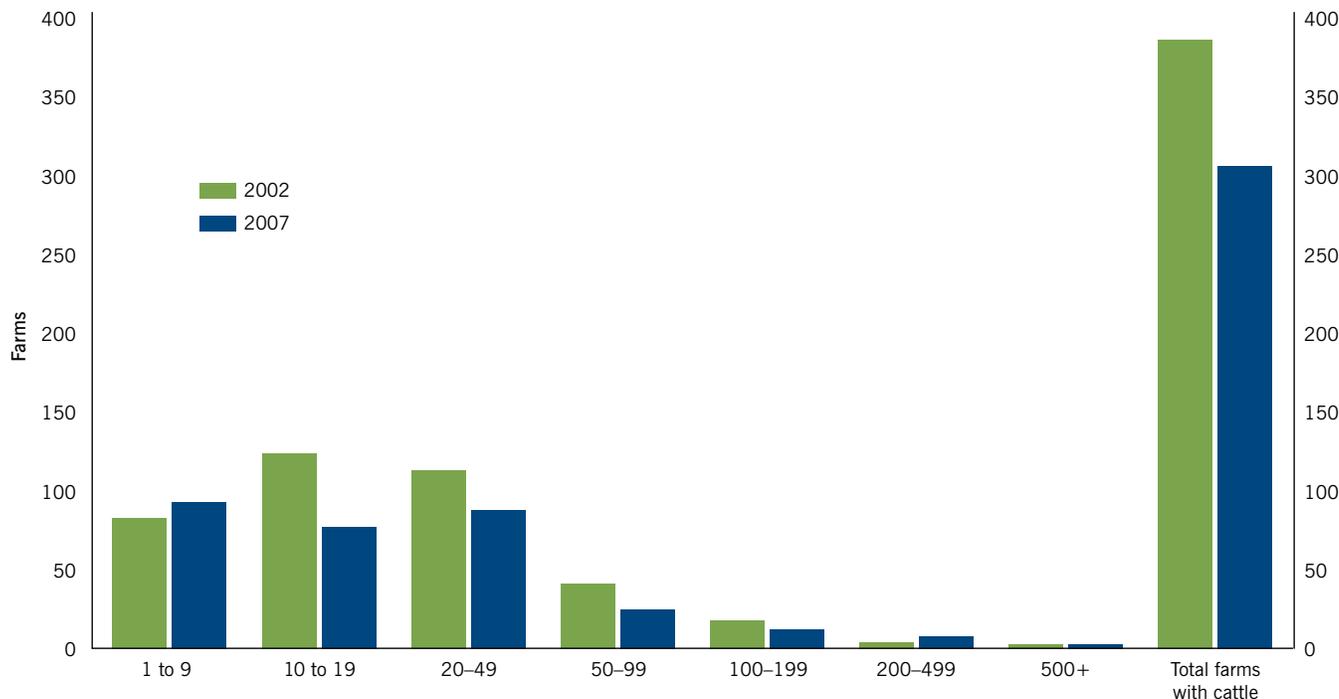
that 80% of Cabarrus cattle farms are cow/calf operations, noting that this number has decreased in the last few years, from approximately 90% to 80%.³⁴

The remaining 20% of Cabarrus beef farmers "finish" between two and five of their cattle and bring them to full weight to sell into local markets. This is sometimes referred to as "freezer beef," which farmers sell directly to consumers through the Piedmont Farmers Market and other direct market channels.³⁵



photo: Jennifer Curtis

GRAPH 3: CABARRUS CATTLE INVENTORY



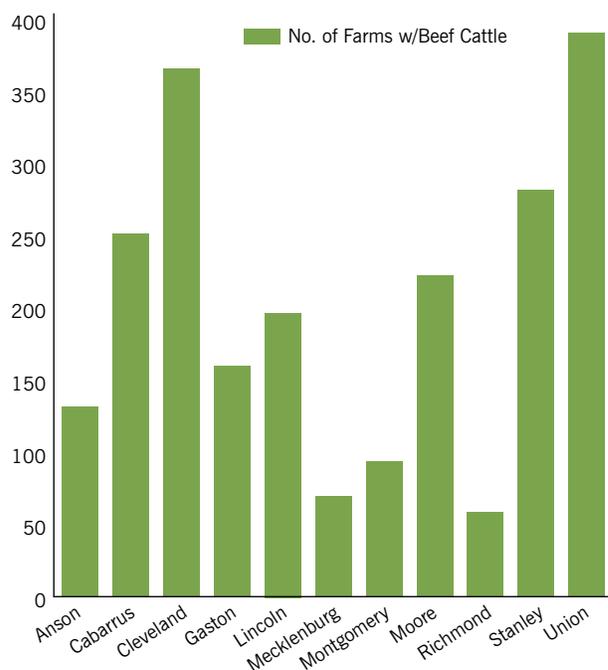
Beef farmers interested in developing local markets — The County Cooperative Extension office surveyed cattle farmers across Rowan, Cabarrus, Union, Mecklenburg, Gaston, Davidson, Richmond, Anson, and Iredell counties. Survey results reveal a large number of farmers are interested in developing local markets for their beef. Out of 236 farmers responding to the survey (from 19 different counties in the surrounding region), close to 60 percent expressed interest in harvesting animals to create meat products for sale to consumers. These farmers are interested in selling through farmers markets (34% of respondents), CSA’s (10%), buying clubs (15%), wholesale (23%), restaurants (18%), grocery stores (15%), and institutional markets (7%). Forty-five respondents currently harvest animals for direct sale.³⁶

Local slaughter capacity to be increased — Cabarrus County is currently investing in a kill floor at the Cruse Meat plant, an already-established meat fabrication business located near Concord. This addition to the Cruse Meat processing plant will give Cabarrus’ independent livestock farmers a place to slaughter, butcher and package their animals for sale at local markets. The facility will be USDA inspected and capable of processing certified organic meat. Long term, Cruse Meats intends to be able to create a wide range of value-added products, including smoked, cured and brined meats.

Livestock of major importance to the surrounding region — Cabarrus is one of 11 counties in North Carolina’s

Southern Piedmont region. The region also includes Anson, Cleveland, Gaston, Lincoln, Mecklenburg, Montgomery, Moore, Richmond, Stanly and Union Counties. The majority of the region’s market sales — 89% — can be attributed to livestock.³⁷ With 32% of the region’s farmers raising cattle, opportunities exist for farmers to work together to increase market access.³⁸

GRAPH 4: SOUTHERN PIEDMONT BEEF CATTLE FARMS 2007



Issues to be explored

Consumer interest in local, and sustainably raised meat is on the rise across North Carolina, and Cabarrus cattle farmers are poised to take advantage of this increase in demand. The 2007 USDA Census listed 14 Cabarrus farms with 50–100 beef cattle in inventory, an ideal herd size for farmers interested in accessing local beef markets. The Census also lists 69 farms with 20–49 beef cattle.³⁹ These farms are ideally suited to scale up inventories, which would create a larger pool of Cabarrus farmers able to both access local markets and take advantage of this increased consumer demand.

MARKET ACCESS

Commodity markets dominate — The majority of Cabarrus' agricultural products are sold in commodity markets. Cabarrus farmers sold only \$90,000 worth of commodities directly to consumers in 2007, even less than the \$100,000 of direct commodity sales reported in 2002.⁴⁰

Local and regional market channels offer untapped opportunity — Cabarrus County farmers currently have few ways to market their products directly beyond the sales that occur at the Piedmont Farmers Markets. Some local farmers do participate in meat buying clubs and/or sell their produce through CSAs, but the numbers are few. Retail, food service and institutional market channels present an untapped opportunity for Cabarrus County farmers both locally and regionally.

Sysco markets and distributes food products to restaurants, lodging facilities and institutions worldwide. The company has two N.C. locations, and one — Sysco Charlotte, LLC — is headquartered in Concord. Sysco recently expressed interest in marketing beef raised in Cabarrus County as part of its Source Verified Program. The company is also exploring plans to open a meat and fish processing facility in Cabarrus County.

The Southern Piedmont includes Mecklenburg County, home to the city of Charlotte — the 18th largest city in the U.S. — as well as approximately 900,000 people. According to the USDA Food Atlas, Mecklenburg is also home to 186 grocery stores and 721 full-service restaurants.⁴¹

Charlotte is also home to the Southeast headquarters of the nation's largest organic food distributor — Albert's Organics. The company places a priority on buying local (within 150 miles) and regional (within 250 miles) foods from farmers surrounding its distribution centers, and its recent move to the Queen City will provide a valuable new market channel for Cabarrus' producers of certified organic fruits and vegetables.

Regional perspective is valuable — Across North Carolina, an increasing number of consumers want high-quality food, produced with farming practices they support and purchased through markets they trust. Developing a regional approach to the Cabarrus food system is one way to help meet this demand.

However, the 11-county Southern Piedmont region is home to only 6,867 farms — 13% of North Carolina's farms,⁴² and as in Cabarrus County, the farming population is aging, with few fruit and vegetable producers. (Only 293 of the region's farms grow vegetables; only 164 include orchard land.)⁴³

Regionally-based efforts, such as growers associations that support farmers in producing for local markets; processing facilities where small-scale producers can pool resources to handle processing, freezing and long-term storage; and farmer-owned cooperatives and outside distributors that coordinate supply and demand between producers and market demand can help farmers succeed by increasing their access to a variety of market channels.⁴⁴

Issues to be explored

Cabarrus farmers need access to all major market channels in order to thrive: direct sales (farmers' markets, food-buying clubs and CSAs); retail (grocery stores); food service (restaurants and institutions). There are different opportunities and challenges associated with each of these market channels. Common to most is the need for infrastructure, businesses and support systems to store, process, distribute and market local products.



photo: Jennifer Curtis

NATURAL RESOURCES

Fewer farms and less farmland — As of 2007, Cabarrus County was home to 611 farms, a 7% decrease from the 658 farms that were reported in the 2002 USDA Census. Cabarrus also lost 9% of its farmland between 2002 and 2007, with farmland totaling 66,780 of the County's 231,524 acres in 2007.⁴⁵

Population rising rapidly — Preserving farms and farmland is a key issue for the County. The N.C. Office of State Budget and Management reported that Cabarrus was the 7th fastest growing county in the state between 2000–2009, with 33.2% growth documented.⁴⁶ By 2030, the population is expected to increase by 45% — from 179,025 to 260,235 — making it harder for farmers to afford and access productive land.⁴⁷

Land is limiting resource — According to the U.S. Census, the County has a land area of 364.4 square miles.⁴⁸ Cabarrus is fortunate to have soils that are well suited to farming — the USDA Natural Resource Conservation Service Web Soil Survey reveals that prime farmland soils cover 56.9% of the county⁴⁹ — but the County is predominantly urban. Land suitable for farming is a limited resource. Extension Director Debbie Bost identified water conservation as an issue worthy of exploration.⁵⁰ Primary water resources include Lake Howell, Lake Concord, and Black Run Reservoir.

Agriculture is a priority — Cabarrus recognizes the value of this agricultural land and is committed to protecting it. The *2006 Countywide Farmland Protection Plan for Cabarrus*

County, North Carolina includes a Voluntary Agricultural District (VAD) program, and the County allows for Enhanced Voluntary Agriculture Districts (EVAD). Extension Director Bost reports that since 2006, approximately 11,000 acres of Cabarrus farmland have been protected, with 60% of that land protected through the VAD program, and 40% through EVAD program.⁵¹

Zoning a key consideration — The County also has made agriculture a planning priority, using zoning ordinances and long-range planning to guide land-use decisions and protect natural resources, including farms and farmland.

Cabarrus County land falls primarily into 10 zoning districts: five residential and five non-residential. Most land is designated as either within the Concord city limits, as Agricultural/Open Space (AO) or as Countryside Residential (CR).⁵² The majority of Cabarrus farms are located within the AO and CR districts.

Ideally, industrial businesses that help transform crops and raw agriculture materials into food products will be located close to farms. Agricultural zoning districts that include farms and the businesses that support them — storing, canning and food processing operations, as well as slaughter facilities and sawmills — make it easier and more affordable for farmers to get their products to markets.⁵³

Cabarrus already makes provisions to allow farm-related industrial businesses in the AO and CR districts. For example, the Cruse Meat plant — which soon will include a kill floor for the region's independent farmers — is located within the AO district, and farm machinery repair shops are permitted there as long as they meet certain standards.⁵⁴

Issues to be addressed

To build its local food system, Cabarrus needs to keep land in farms. The County's farmland preservation policies have proven to be successful in addressing growth pressures. Yet in order to guarantee agricultural production, Cabarrus will also need to invest in efforts to keep farms financially viable. Water conservation also needs to be addressed as the County plans for farmers' long-term success.



photo: Jennifer Curtis

Cabarrus boasts strong local ownership of its farms.

Local farm ownership can be considered the keystone of sustainable communities. Farmers who own the farms they operate are more likely to participate in the local economy and take care of the land and surrounding environment for future generations. They also provide the human capital society needs to feed itself.

PRODUCE PRODUCTION

As mentioned earlier, motivated and engaged producers are critical to building successful local food enterprises. The summary below includes key points taken from telephone and in-person interviews with produce farmers who are actively participating in the County's local food system. It also includes comments made during a producer focus group.

Throughout the interview process, special attention was given to the following questions: What are the barriers to increased fruit and vegetable production? How can Cabarrus scale up fruit and vegetable production? For farmers looking to transition

into specialty/vegetable crop production, what are their needs in relation to skills, labor, equipment, and markets?

Additional questions that warrant further attention include: What are the barriers to business success for Cabarrus farmers? What programs are available to help them overcome these barriers? What needs remain unmet? Which programs specifically address new and beginning farmers vs. farmers in transition? What strategies work best to support women entering farming as a career?



Farmers serve direct markets

Most of the small-scale, local produce farmers who currently sell to local markets are doing so through direct market channels (Community Supported Agriculture (CSA), food-buying clubs and farmers' markets). Farmers engaged in direct market sales enjoy the communication with customers and the ability to sell their own product.

When asked directly, five of the six producers participating in the focus group said that they prefer to stay in direct markets. These farmers also prefer to avoid any Good Agricultural Practices (GAP) certification, and the additional costs that go with it, even though it is required in order to access larger markets, such as grocery stores and institutions. "I am accountable for my product," said one.

Farmers cited supply as a second barrier to working with institutions. "We have a lot of work to do before we can get to the point of supplying a major institution," said another.

Farmers see selling at the farmers' market as a good way to interact with customers and build name recognition, but not a strong money-maker. They see the market as time-consuming for them and inconvenient for consumers. Small-scale Cabarrus producers are more interested in exploring ways to work with CSA operations and food-buying clubs. "There is the same amount of work to do a CSA, without having to spend the extra time selling," one farmer commented.

CSAs and food-buying clubs rely on consumer demand for success. Farmers often must invest time — up to two years — to build name recognition before starting a successful CSA.

Farmers are interested in seeing new distribution models developed to help them get their products to consumers and restaurants. Farmers Fresh Market (www.farmersfreshmarket.org), an online ordering company that connects Rutherford County farmers to Charlotte chefs, was mentioned as an example.

Farmers would like to see more information available to consumers about how to find farms in Cabarrus County and what products are available. They also mentioned the need to both define "local" and promote the CEFS' 10% Campaign to both consumers and businesses. For more about the campaign, see www.cefs.ncsu.edu/whatwedo/foodsystems/10percent.html.

One farmer mentioned that health and wellness often drive local food purchases, and suggested that more consumer education would help producers capitalize on this trend.

When asked about price, farmers say it is not a big barrier for most consumers. "Consumer education is 90 percent of the job," said one. Farmers can sell their products for more at Charlotte farmers' market, as long as the product is bagged.

Small-scale infrastructure is needed

Throughout the 20th century Cabarrus was dominated by the textile industry, which means few investments were made in infrastructure to support agriculture. Today there are no produce processing facilities in the County, and farmers don't have ready access to ways to create value-added products. Farmers commented that a community kitchen facility would be helpful because it would give them a place to wash, cut and store products. Many also cited the need for a cannery.

Producers from the Food Policy Council’s Food, People and Resources Committee have drafted a wish list for a facility that would help connect small and mid-scale producers with wholesale distributors. They describe a building that would have loading docks, a place to wash produce, plus coolers and freezers. It would most likely be a producer cooperative and ideally, would serve as a distribution point for CSAs and have some retail capability. Notes from the January 2011 committee meeting include \$3 million as one cost estimate.

Soil and water shortages can present challenges

Cabarrus soils and climate are adequate, but not ideal, for vegetable production. The County is a drainage area between the Rocky River and Buffalo Creek, which gives it rocky slate belt soils and steep slopes. Cold air sinks into the low lying areas along the slopes, making the County’s last frost date April 10, compared to April 1 for Rowan County, which sits up higher on a plateau. The 10-day difference in these frost dates puts Cabarrus farmers two to three weeks behind Rowan farmers in getting products to market.

Water can also be a challenge for Cabarrus farmers. Water storage is mostly in shallow aquifers, and wells can have low yields.

Produce production is critical but faces challenges

According to County Extension Agent David Goforth, vegetable farming in Cabarrus is a good source of part-time or retirement income.

However, the County is encouraging new farmers through the Elma C. Lomax Incubator Farm, where 14 people are making plans to enter farming as a full-time occupation. These new farmers need marketing education and access to land.

Extension Director Debbie Bost reports the County is working to connect landowners who want to make land available for agriculture with farmers enrolled in the Incubator Farm Program. “We have put people on land, and we have three farmers working to prepare land this year, so they will be able to farm it next year,” she said.

There is also some opportunity for increased fruit production. “We don’t have a strawberry grower in the County, and for anyone to get started, they would need water. The main thing is to find someone who wants to do this,” Goforth says.

One farmer, who works full-time at Lowe’s and owns a U-pick blackberry farm, is interested in scaling up production. To do this, he needs access to capital and/or grants to cover costs of

land or new on-farm infrastructure. He has explored selling to Dole, which has a research facility in the Kannapolis, but said they require their berries to be chilled to 34 degrees in 20 minutes. “This takes massive chillers and a lot of labor. Plus if you don’t meet their standards exactly, they won’t buy the berries,” he reports.

Produce production

SUMMARY

It is challenging for small-scale produce farmers to support themselves and their families on farm income alone. Fruit and vegetable production is often suited for part-time or retirement income. Direct markets — CSAs, food-buying clubs and farmers markets — offer the greatest potential for enhancing farmer profitability. Farmers serving these markets are looking for ways to expand their business, both by reaching new customers and using new models for distribution.

Scaling local food supplies beyond seasonal fresh produce sold directly to consumers will require that farmers have access to capital that covers infrastructure costs as they try to maintain or improve their operation. And new and existing farmers need access to land.

It is noteworthy that few farmers interviewed expressed an interest in scaling up production. The County is building its producer base through the Incubator Farm, but needs strategies for cultivating mid-scale farmers as well. If producers do decide to increase production, they will need infrastructure that is appropriately scaled to meet their needs. This infrastructure is critical to their ability to access larger markets, such as restaurants, grocery stores and institutions.



photo: Jennifer Curtis

1. Invest in educating new farmers about ways to access different market channels and provide models for success. Two resources include NC Choices and Appalachian Sustainable Development Project's "Marketing Opportunities for Farmers" conference. For additional information related to direct markets, see Marketing and Distribution.
2. Investigate processing and distribution models that serve small and mid-sized producers. One example is the *Appalachian Harvest Network*, a group of certified organic family farmers in southwest Virginia who make locally grown, organic produce and free range eggs available to area supermarkets. <http://www.asdevelop.org/appharvest.html>
3. Invest County resources in a consumer education initiative that highlights local farmers, connects consumers with them and provides examples of ways to use fresh produce. For an example of online and print resources that direct people to local food and farmers, see <http://buyappalachian.org/>.

The summary below includes key points taken from telephone and in-person interviews with individual beef producers and independent retail operators, as well as from comments made during a consumer focus group.

Questions for individual producers were designed to determine priorities and challenges for Cabarrus farmers. Questions for focus group participants were designed to gauge consumers' opinions about purchasing locally-raised beef. County extension staff was interviewed to gather information about current programs and county-wide conditions.

Throughout the interview process, attention was given to the following questions: What assistance and support do local beef farmers need to sell their beef to local and regional markets? What markets are potentially accessible to farmers selling local and/or all natural beef? What barriers prevent farmers from accessing these markets? What opportunities exist for regional collaboration?



photo: Jennifer Curtis

Consumers interested in local beef

Consumers are interested in buying the product. The small grocery stores that stock local meat report demand to be fairly constant, and one new Cabarrus food-buying club increased its meat sales from two to 13 animals in just one year. One local farmer who sells beef, pork, chicken and eggs through a variety of direct markets, expects 2011 sales to increase more than 100 percent over 2010 sales.

Consumers who participated in the beef focus group cited two main reasons for purchasing local beef: 1) the absence of hormones and/or antibiotics makes it healthier than other beef; and 2) purchasing local beef supports the local economy. They also mentioned that local beef farming was better for the environment and helped preserve open space.

People are looking for convenience when purchasing local beef. Participants in the beef focus group said that the limited location and hours of farmers markets, plus the need to pick up meat on farms were obstacles to buying local beef. They also said they would buy more local beef if it were more readily available.

Price and taste need to be considered

In direct markets, price does not appear to be a major obstacle. Many of the consumers in the beef focus group said price was not a huge consideration when buying local beef.

On the other hand, restaurant chefs report locally-raised beef can be too expensive to serve—costs can be up to two times higher than quality western grain-fed beef they get from major distributors. Consistency of volume and quality are always major issues for restaurant buyers and can be challenging for low-volume producers to achieve.

Earth Fare, a grocery store chain with two Charlotte locations, has a local grass-fed beef program that sells meat from Hickory Nut Gap Meats based out of Asheville. This farmer-owned branded meat company sources cattle from farms in the Iredell, Montgomery and Buncombe counties. Earth Fare is committed to continuing its program, even though some challenges exist. Hickory Nut Gap Meats is open to adding farms as producers, including from Cabarrus County, as long as producers meet their production and meat quality protocols.

In terms of the market for grass-fed beef, taste is an issue for both consumers and producers. Most consumer palates are accustomed to the taste of western grain-fed beef. One producer who is considering the possibility of marketing local grass-fed beef expressed concern that customers would bring the product back because of its taste. She herself does not like the taste of grass-fed beef.

Opportunities for growth exist

Department heads at two major County agencies, the Department of Aging and the Cabarrus County Jail, are motivated to source food locally as part of their participation in Cabarrus County's Local Food Purchasing Program. Yet they source all meat for clients through large distributors and are unaware of local meat options for departmental meetings and catered events.

County Extension Director Bost reports that Sysco has purchased a plant in Charlotte to grind and distribute hamburger. The company is willing to buy local beef for the operation, and the County is working on ways to help them accomplish this goal.

Sysco's Verified Beef Program offers a potential opportunity for Cabarrus beef producers. Carl Pless reported that the County needs to give Sysco a timeline for opening the Cruse facility, then needs to find out what Sysco's needs are and determine whether they can deliver.

Pless is interested in seeing the development of a program that would source cattle from multiple local farmers but have the animals "finished" by one producer, so that consistent feed programs are specified. He indicates this is a major issue for ensuring consistent meat quality. "Ideally we'll have the same finisher for the product, so the product will be consistent," he says.

When considering quantity, the number of animals needed per year will be critical. Pless reports that finding farmers to scale production will be necessary and that consumers' interest



photo: Jennifer Curtis

in buying local beef will influence farmers' interest in scaling. He noted that Sysco has sold local beef in other markets by targeting restaurants and convention center clientele.

To be successful, the proposed Cruse meat slaughter and processing plant would need to increase volume from 20 to 50 cattle per week within a relatively short time frame. A large number of farmers (141) across the region have expressed interest in selling to consumers through farmers markets, CSAs, buying clubs, wholesale, restaurants, grocery stores and institutional markets. Yet many of them are new to local beef farming and marketing their products. Both new and transitioning farmers will need assistance with logistics, marketing and business planning.

Construction for the slaughter facility is expected to begin this fall. As of July 2011, a construction bid had been awarded for the facility, and the County was working to complete the lease and operating contractual agreements with the Cruse family. Additional funding is needed to cover the costs of installing wastewater treatment infrastructure for the facility, and the County has identified a source for these funds.

Cabarrus meat producers expressed a wait-and-see attitude when considering whether to utilize the Cruse facility. Traceability seemed to be the biggest issue, with farmers clearly wanting a way to establish it, so they could guarantee that the meat they pick up to sell is their own. Farmers working with local commercial processing facilities commonly express concerns about traceability.

People need to know about the economic and food security benefits of buying local beef.

Distributor sees future potential

Mooresville Meats, a small chicken, pork, and beef production facility in southern Iredell County, distributes to over 300 restaurants in the greater Charlotte area, including many Cabarrus County restaurants. They have a retail outlet — a Mooresville butcher shop — and offer some local, grass-fed bison and beef, which are promoted mostly in their retail area. They are willing to talk to farmers in the Cabarrus area, but don't plan to expand their local meat offerings at this time. "The hardest part of dealing with local farmers is the requirements that the USDA and the health inspectors make us meet in order to call the product locally grown and grass fed," says one employee. "The wholesale side of the grass fed craze has yet to catch fire, although personally I believe it will be on every menu in the next few years."

Beef production

SUMMARY

There is consumer interest in local meat. Direct sales are thriving, and there is an opportunity to increase them through direct market channels. It would be worthwhile to support food-buying club(s) that offer meat. Restaurants offer a potential market, but heavy promotion and greater volume of consistent quality products will be necessary to address their concerns regarding price.

Consumer education is key to promoting sales of local beef. People need to know about the economic and food security benefits of buying local beef. In the case of grass-fed local beef, they need to know why it tastes different and to learn cooking methods that optimize tenderness and flavor. Consumers also need to know where they can purchase local beef, and they need more purchasing options that are convenient.

Beef farmers will need to provide a larger, more consistent supply of beef in order to access institutional markets, as well as some restaurants, through broad line distributors. More entrepreneurs are needed to focus on scaling supply and addressing critical marketing and processing issues. The Cruse Meat processing plant has the potential to be a major asset in bringing processing capacity closer to home but does not take precedence over producer support and education, aggregation of volume and market outreach and development.

Beef production

RECOMMENDATIONS

1. Support existing farmers who are interested in increasing their access to a variety of market channels, particularly direct channels and existing branded programs that already have market access and processing capacity. Hickory Nut Gap Meats, which currently has access to 25 restaurants, as well as Earth Fare and Whole Foods Market, is one example.
2. Provide future local beef farmers with the information they need to begin a new operation, scale up existing ones and/or transition from cow/calf operations to finishing beef for local markets.
3. Support Cruse Meats facility in becoming a successful operation. One key component will be a traceability system.
4. Invest in a consumer education campaign that highlights the benefits of buying local beef and lets people know where they can purchase it.



photo: Jennifer Curtis

PROCESSING CAPACITY

Food processing is part of food systems infrastructure, and is defined as the physical capacity to get food from farm to market. In our Phase I summary we reported that farmers participating in local food systems need access to infrastructure that is scaled to meet their needs. This summary includes key points taken from interviews with farmers and County Extension staff, as well as food processors and distributors.

Throughout the interview process, attention was given to the following questions: What infrastructure is available to small and mid-sized farmers in Cabarrus County? Does it meet local farmers' needs, and if not, why not? What infrastructure is needed to expand market opportunities? Do opportunities exist for regional collaboration?

Processing capacity

ISSUES AND THEMES

Infrastructure cited as a need

The County has no processing facilities for produce. Several people interviewed mentioned that access to community kitchen and a cannery would be beneficial for local farmers.

As mentioned earlier, a Food Policy Council committee has drafted a wish list for a facility that would help small and mid-scale farmers process produce so that it could be sold to wholesale distributors. The building would have loading docks, a place to wash produce, plus coolers and freezers.

An effort is currently underway to secure grant funding for research that would measure food production and consumption in the Charlotte metro area. Cabarrus County is an active participant, along with food system stakeholders from Mecklenburg and neighboring counties. The goal is to show the potential economic impact of a regional food system and to use the data to develop food systems infrastructure — possibly an aggregation facility — that will support producers from across the region.

Cruse plant will provide local meat processing infrastructure

As mentioned above, construction for the Cruse slaughter facility is expected to begin in 2011. The County needs additional funds to cover the cost of handling wastewater inside the facility, and it has identified a source for that funding.

Opportunity for local produce processing is limited

One processor, a local business owner, says cost affects his purchase of local food. Distribution is also a problem because he cannot go pick up products. Finally he reports he needs more supply and variety. If he buys squash from an individual farmer, it often isn't enough, so he has to go out and buy more, which is inconvenient. "Bottom line is if you can't guarantee product supply or availability, then it won't work," he says. "I'm open to buying local, if the supply is there and the price is reasonable."

The Bost Grist Mill in Concord sells some grits and corn meal, mostly as novelty items. The owner is open to selling/grinding locally-grown corn — not wheat — but currently doesn't have a way to store what he grinds. His facility is state inspected, which means the corn is checked every 30 days. He prefers to keep corn chilled to store it, as opposed to using chemicals to keep it bug-free.

Daily Manufacturing processes and distributes nutritional herbs and supplements. Some high demand herbs that can be grown in Cabarrus are Echinacea, milk thistle, dandelion, garlic and possibly ginger. If grown in Cabarrus these products would need to be processed and cleaned at another facility. Most herb processing facilities are in California.

Processing options are limited to non-existent for small-scale Cabarrus farmers. A facility with space for washing, cooling, freezing, storing and packaging would help vegetable producers diversify their product offerings and increase the efficiency and potential scale of operations. As a result, producers will be better able to increase their access to a variety of market channels, including larger markets, such as restaurants, grocery stores and institutions.

The new slaughter facility at the Cruse Meat plant will help fill that gap for local beef farmers. An opening date for the facility is still unknown.

1. Collaborate regionally to determine ways Cabarrus can facilitate producer access to processing infrastructure. The County is currently working with numerous other partners to research regional data related to food production and consumption that can be used to develop infrastructure. Continued participation in this effort will enhance future opportunities for Cabarrus farmers. As mentioned above, Appalachian Sustainable Development's *Appalachian Harvest Network* serves as a model for a regional processing facility that gives farmers access to wholesale markets.
2. Continue communicating with beef and vegetable producers to clarify processing needs.

Commissioners agree a local food system that fosters local production, processing, distribution, and consumption of food in Cabarrus County is at the heart of a sustainable community.



photo: Mike Linker

MARKETING AND DISTRIBUTION

A. Direct Market Channel

Across North Carolina, sales of food through direct market channels — farmers' markets, CSAs, buying clubs — continue to increase. However, they make up only a small percentage of total food sales. In 2009, a mere two percent of U.S. consumers reported purchasing the majority of their food at farmers markets.⁵⁵ Yet as consumers continue to value detailed information about how and where their food is grown — information that is more likely to be available through direct market channels⁵⁶ — direct markets offer an opportunity for growth, both across the state and in Cabarrus County.

Cabarrus has 37 farms that sell directly to consumers.⁵⁷ This summary includes key points taken from telephone and in-person interviews with some of these vegetable and meat producers, as well as interviews with County Extension staff and small business owners selling locally-produced food through direct market channels. Questions were designed to assess challenges and opportunities associated with direct markets.

Throughout the interview process related to all five market channels discussed below, the following questions received special attention: Which market channels are currently accessible to local farmers? What barriers do Cabarrus farmers face in accessing these markets? What factors contribute to success in accessing local markets? What resources are needed to expand local markets? Do opportunities exist for regional collaboration that leads to increased market access for local farmers?

Marketing and Distribution

ISSUES AND THEMES

Farmers prefer direct markets

As mentioned above, most small Cabarrus farmers sell through direct market channels, and many of these meat and produce farmers wish to continue serving direct markets. One farmer at the producer focus group commented, "I cannot think of one negative thing about a CSA. It's the best move my farm has ever made."

These direct market venues are locally-led activities that do not require statewide oversight. Again, many local Cabarrus farmers are not interested in gaining the third party certification required to sell through other market channels, such as grocery stores or institutions. Many of these farmers are operating at a small scale that would make it difficult for them to access these channels, which require larger volume.

Micro-aggregators offer opportunity for growth

Food-buying clubs and CSAs offer opportunities for growth. One local food-buying club that sells beef, pork, chicken, vegetables and eggs from five producers, started with 45 people in its database in January 2010. Today the database includes more than 750 people from Cabarrus and nearby counties.

Extension Agent David Goforth sees an opportunity for more CSAs in Cabarrus County. Plus, there is a potential market for more CSA operations to serve Charlotte customers because CSAs in Mecklenburg County often sell out early in the summer growing season.

Both CSAs and food-buying clubs require certain skills to operate. Farmers must devote time to organizing these businesses, which often include web sites complete with online ordering. They also must provide on-going customer services, which can include opening the farm to visitors, making special deliveries and providing recipe suggestions.

Farmers' market sales could be stronger

Cabarrus farmers who sell at the Piedmont Market value the opportunity it offers to build name recognition and interact with consumers. Still, they report sales are not as strong as they would like them to be. The market is open five days during the week, alternating between four locations throughout the County, and yet farmers report that many customers find the hours inconvenient. Plus, farmers must take valuable time away from farming to attend the market, and some full-time producers report that lifestyle farmers undercut their prices.

One local food supporter from Charlotte reports that the most successful farmers markets in the region are the Matthews Market, the Atherton Market and the Davidson Market. All are community gathering places, where people come to socialize and buy produce, crafts, flowers, plants, and value-added products.

Farmers serving these direct markets are looking for ways to expand their business, both by reaching new customers and using new models for distribution.

Growth in direct markets — CSAs, food-buying clubs, farmers' markets — across North Carolina has been phenomenal. These direct markets offer advantages for both farmers and consumers. Farmers enjoy the full retail price. And consumers, because of their direct connections to the farmers, understand and appreciate exactly where their food comes from and can often get fresher products.

Cabarrus County is in a good position to expand direct market sales of local food. Increasing direct market sales offers excellent opportunities to build the County's local food system. Potential impacts include increased consumer awareness of benefits related to local food, more support for small-scale farmers, more businesses engaged in the local food system, and increased consumption of locally grown and raised food.

1. Invest in ways to increase consumer access to direct market channels. Examples include adding drop points to County offices, businesses and schools and promoting direct market channels through the consumer education initiative mentioned in Produce Production Recommendations.
2. Encourage new business development of micro-aggregators that will serve direct markets. Examples include Retail Relay, an online grocery store (www.relayfoods.com); Freshlink, an aggregator that offers the option to dedicate farm capacity to individual customers who work with farmers to plan crops for a seasonal menu (www.thefreshlink.com); Farmers Fresh Market, (www.farmersfreshmarket.org); and Go Local NC Farms, a food-buying club operating in Cabarrus County (www.golocalncfarms.com).
3. Provide farmers with training and technical assistance they need to access these markets successfully.
4. Explore ways to increase traffic at the farmers market. Administering a survey of market shoppers to find out why they shop the market is a possible first step.



MARKETING AND DISTRIBUTION

B. Food Service Market Channel: Restaurants

The National Restaurant Association's "What's Hot in 2011" survey of more than 1,500 professional chefs revealed that local sourcing will be one of the hottest trends on restaurant menus in 2011. The U.S. Department of Agriculture's (USDA) most recent research into consumer expenditures on food — collected in 2009 — reports that American consumers spent 40 percent of the money they spent on food away from home at full-service restaurants.⁵⁹

The County has 126 full service restaurants,⁶⁰ and Mecklenburg County has 721.⁶¹ This summary includes key points taken from telephone interviews with chefs in both counties. We asked chefs about challenges they faced when selling locally-grown food, and questions for micro-aggregators were designed to gauge demand for local food and identify restaurant needs. Comments from farmers who are working to access restaurants are included as well.

Relationships, education keys to success

Chefs' awareness of and use of locally-grown products varies throughout both Cabarrus and Mecklenburg Counties. In both counties, chain restaurants are less likely to use locally-sourced ingredients than individually owned establishments.

In Charlotte, upscale restaurants are the most likely to use local ingredients, although more chefs are becoming interested in serving local food. Students training in the Culinary Program at Charlotte's Art Institute learn about both the values of relying on a local food system and why seasonal menus are important in a required class titled "Contemporary Cuisine."

The chefs we interviewed have different definitions of local. Some define it as produced within 50 or 100 miles, while some consider anything produced in North Carolina to be local. Others will go outside the state for specific products, especially those they like that are produced by farmers they trust. For the chefs who do use local ingredients, their relationship with the farmer is the key factor in determining whom they buy from. One chef, also a farmer, says "I must meet you, know you and have a relationship with you before I'll buy from you."

Once a relationship is established, however, many (but not all) chefs are often willing to be more patient with farmers than with a broad line distribution company. Most chefs are willing to promote farmers by identifying them and their products on the menu or in the restaurant.

Conversations revealed that chefs are more likely to use locally-sourced produce than locally-raised meat in their menus. One chef reported he can get high-quality meat products from a broad line distributor — regardless of where it is produced—for half the price it costs him to purchase locally raised meat products. And he adds, "At least with produce, you pay more for it, but the flavor is so much better, it can be worth it."

Another chef said that public education is critical when using local ingredients. "If you charge your customers more, you need to explain why. The good news is that when people see how hard the farmers work, and how hard the chefs works, it's not as big a problem."

Chefs need to be educated about local food as well, especially the products that are available. One new Concord chef reports that it's easier not to buy local food, because broad line distribution companies contact restaurants to find out what products they need, while local producers and distributors do not. "I'm interested in learning about and buying local, but I need to know what's available. There's nobody really pushing local, and if nobody's asking you to do local, you don't."

Opportunity is there, but barriers exist

Price does play a role in chefs' decisions to buy local. Locally-sourced ingredients can cost 20 to 40 percent more than conventional ingredients, and chefs who pay more for local ingredients inevitably pass those costs on to their customers. "It can be really hard to use local meat and produce on the same plate, because of the costs," one chef said.

Supply can be challenging. Farmers growing for the local food system often produce small amounts of a variety of vegetables. Or they have small animal herds, making their annual yield lower than that of conventional producers. As a result, chefs often cannot get the volume they need from one farmer, which makes ordering and menu planning more time consuming.

Chefs also would like more variety from local farmers. One entrepreneur working to distribute local produce to restaurants says that many farmers in the Charlotte region grow similar items, such as tomatoes, collards and sweet potatoes. "Chefs would like to see more specialty items, like mushrooms and lettuces," he says. "It would be great if chefs could get kitchen staples that have been locally grown. Every chef uses onions, carrots, celery, and white potatoes, but they can't find these locally."

Farmers often don't know how much it costs them to grow each item, so it's hard for them to negotiate price with restaurants. The more farmers know about what it costs them to grow a single item, the better they are able to negotiate on price, which makes it easier for distributors to sell their produce to restaurants.

Distribution is also challenging because most restaurants need their products delivered, sometimes more than once each week. Farmers must either invest the time and money it takes to deliver their own products, or work with a distributor, many of which require third party certification for their products.

From a farmer's perspective, chefs move often, so it's hard to keep relationships going. Plus it takes valuable time away from farming to manage relationships with chefs and provide them with the service they request. And just as some chefs find it hard to know what farmers generally have available, farmers struggle to know what chefs need.

Farmers mentioned other challenges in working with restaurants: customers don't appreciate the taste of fresh food; chefs are hard to meet with and aren't always familiar with the realities of farming; deliveries make working with restaurants time-consuming; cost can be a barrier for some chefs. "We lost a sweet potato buyer because of the money," said one farmer. "It took us additional time to process the product, and they didn't want to pay for it."

Restaurants offer a viable market channel for farmers, one that offers potential for growth. Increased communications between farmers and chefs — as well as education for both groups — is needed to facilitate this growth. A strong business relationship between chef and farmer is also critical to success in this market. These relationships take time to nurture, but the trust built by them allows farmers to work directly with restaurants without the need for third party certification. Plus restaurants have the opportunity to educate consumers about the value of local food, which could help increase demand for local food.

1. Build relationships between chefs and farmers through farm-to-table dinners, educational events and restaurant associations.
2. Promote restaurants that support local farmers, as well as the economic benefits of this support, through the communication initiative recommended in Produce Production Recommendations. Promote the CEFS 10% Campaign as part of this effort.
3. Support micro-aggregators and distribution models that allow farmers to deliver to restaurants without necessarily using broad line distribution companies.
4. Educate chefs about ways to use whole animals in menu planning, which will enable them to serve local meat economically.



photo: Becky Kirkland

Cabarrus County is in a good position to expand direct market sales of local food. Increasing these direct market sales offers excellent opportunities to build the County's local food system.

MARKETING AND DISTRIBUTION

C. Food Service Market Channel: Institutions

Cabarrus County contributes to funding for the Department of Aging, Kannapolis City and Cabarrus County Schools, and the Cabarrus County Jail. Together these institutions spend approximately \$4.8 million on food annually.⁶² Carolina Medical Center (CMC) Northeast, a privately managed hospital in Concord, is another institution with significant food purchases.

This summary includes key points taken from telephone interviews with Cabarrus institutional food buyers, as well as a meeting of County Departments Heads and other County staff working to implement the Local Food Purchasing Policy. Questions were designed to establish current food purchasing practices and to identify opportunities and challenges associated with purchasing locally-produced food.

Marketing and Distribution

ISSUES AND THEMES

County institutions have relationships with broad line food distributors

When purchasing food to serve clients — seniors, students and inmates — institutions contract with broad line food distributors. Sysco distributes to the Department of Aging, Kannapolis City Schools and to the County Jail, and U.S. Foodservice distributes to the 37 schools in the Cabarrus County School System. The distribution company bids on the contract, which is awarded to the lowest bidder. Fresh Point delivers produce to CMC Northeast, which awards bids based on service and price.

Cabarrus County Schools do offer geographic preference for individual non-processed items, such as carrots. Yet in order to source these items locally, the school system must identify the need for it as a separate item, and then get three different bids. The contract for carrots or similar items would also be awarded to the lowest bidder.

Both Cabarrus County Schools and Kannapolis City Schools participate in the N.C. Farm to School Program. The program provides North Carolina grown items including apples, strawberries, broccoli, cabbage and sweet potatoes. Menus are planned annually, then adjusted when this produce becomes available. Staff usually receives three months notice about the produce. They use this time to plan for promoting the produce.

The Kannapolis City Schools purchase 35 percent fresh food, 10 percent canned fruit, and 55 percent frozen food. They do not purchase canned vegetables due to their low nutritional value.

The kitchens at the all four departments and CMC Northeast are adequately equipped to prepare fresh produce.

County staff working to implement Local Food Purchasing Policy

In 2010 the County adopted a Local Food Purchasing Policy that requires County employees to locally source 10 percent of all food served at County catered events and small department sponsored meetings from food producers within North Carolina. Department leaders are currently taking steps to meet this requirement.

The Local Food Purchasing Policy identifies the Department Head as the agency contact for sourcing and purchasing local food, but most need information about how and where to find local food. As Department Heads work to comply with the County's Local Food Purchasing Plan, they are raising questions about how to define local. For example, when working with Punchy's Diner, they were unsure if they needed to ask whether the meat was locally-raised, locally-processed or both.

Department Heads anticipate having to spend more money on local food, making cost a challenge. They also need information about ways to substitute locally-sourced food for processed items, such as granola bars and cheese trays that are convenient and commonly used at meetings/departmental events.

Food safety requirements, supply present expected challenges

Department managers rely on Cabarrus County Risk Management office to determine food safety requirements. In general, individual vendors must comply with the food safety requirements mandated by the distribution companies. CMC Northeast, Cabarrus County Schools and Kannapolis City Schools require each vendor to have a Hazardous Analysis Critical Control Point (HACCP) plan in place.

To access institutional markets, individual farmers must be able to meet their supply needs. For example, a producer providing a product to Cabarrus County Schools must supply 37 schools each week.

Marketing and Distribution

SUMMARY

Institutions are big food purchasers, and so they are attractive markets for local food. However Cabarrus farmers are currently not producing enough to supply these markets. Beef has more potential than produce to be a viable product for institutions, but much needs to happen before that is possible. The Cruse facility needs to open and local beef producers need to scale up production. Relationships must be built between farmers and the distributors who supply these institutions.

Department heads working to adopt the Cabarrus County Local Food Purchasing Policy offer a more immediate

opportunity. They are interested in complying with the policy, but need information about where to buy local products and what to buy.

Marketing and Distribution

RECOMMENDATIONS

1. Connect County department heads with restaurants and other food businesses that buy locally-sourced ingredients.
2. Educate them about ways to substitute locally-sourced products for commonly-used processed food, as well as ways to include locally-raised meat options.
3. Explore models for producer cooperatives that will allow farmers to pool resources so they can address education and processing needs and food safety requirements with the goal of being better able to meet institutions' supply needs. Examples include Eastern Carolina Organics, LLC (ECO) a farmer and staff owned business that markets and distributes organic produce to retailers and restaurants across North Carolina, www.easterncarolinaorganics.com. Hickory Nut Gap Meats, a producer network and branded-meat company that serves restaurants and grocery stores, is another, www.hickorynutgapmeats.com.

MARKETING AND DISTRIBUTION

D. Retail Market Channel: Grocery Stores

Food retail can take a number of forms, including convenience stores, specialty food stores, grocery stores and supercenters, or club stores. Consumers across the country buy almost 60 percent of the food they consume at home from grocery stores.⁶³

Cabarrus County has 29 grocery stores.⁶⁴ This section includes key points from telephone and in-person interviews with representatives from some of those stores, a group that includes small store owners and staff from larger chain stores. Questions were designed to establish demand and to identify opportunities and challenges associated with selling locally-produced food through this market channel.

Many grocery stores were difficult to contact. Repeated efforts were made to identify and communicate with both staff and buyers at Fresh Market and Food Lion, but these efforts were unsuccessful. Information from company web sites was included to fill in some of the information gaps relating to larger grocery chains.



Large chains dominate market

In the 1990s, Cabarrus County was home to a successful independent and locally owned grocery, Dover Supermarket, which had three locations as of 1998. Today large grocery chains dominate the market in both Cabarrus and Mecklenburg Counties. Fresh Market and Earth Fare, two smaller chains with multiple stores in the southeast, have locations in Charlotte.

Some of these stores label produce as locally grown, even though it is grown too far away for many to consider it local.

Company web sites reveal that Lowes Foods, Harris Teeter and Food Lion all carry independent organic label products. There is no evidence that these products are sourced locally.

Albert's Organics is interested in working with local farmers, but they must be certified organic. The bulk of their business goes to mass markets, which is interpreted (but not confirmed) to be big grocery store chains. They also serve natural food stores, some buying clubs and some food service/institutional accounts.

Food Lion identifies N.C. farms that provide products to the store, but individual products are not connected to individual growers. The farms appear to be large operations, and it is unclear how much of the store's produce they supply.

Food Lion sells "Got to be NC" products and includes the label on its web site. The company, headquartered in Salisbury, has promoted N.C. products in the past, through the "Got to be NC" label and a partnership with the N.C. Department of Agriculture. The most recent promotion was in July 2007. North Carolina products were featured in sales fliers and product samples in stores across the state.⁶⁵

A conversation with a Food Lion produce manager reports he is ordering products from Food Lion buyers. These buyers purchase products on a very large scale. For example, they bid on entire fields of strawberries at a time.

Demand increasing slowly

Demand for locally-produced products is increasing slowly, but cost is often more important to customers, especially given the recent recession.

Extension Director Bost agrees with other interviewees who said that consumers need convenient retail access to locally produced food.

Two small operations — one in Davidson County and one in Mecklenburg County — report a steady demand for locally-raised beef, poultry and pork. As mentioned above, Earth Fare also sells grass-fed beef raised in North Carolina at both its Charlotte locations.

Earth Fare is committed to its local grass-fed beef program, even though it faces challenges related to volume and price.

Hispanic grocery store Super Macado currently offers

In order to access grocery stores, small-scale independent farmers need access to infrastructure as well as distributors who are willing to work with them.

locally-produced cheese that sells fairly well. The owner is open to working with more local farmers. Three butchers work at the store.

Farmer education, infrastructure needed to access market

In order to access grocery stores, small-scale independent farmers need access to infrastructure, as well as distributors, who are willing to work with them. Many distribution companies that now deliver to grocery stores require farmers to have GAP certification, which can be expensive for small producers. Many Cabarrus farmers prefer to avoid the need for GAP certification if at all possible.

Independently owned grocery stores are ideal markets for small-scale independent farmers. Yet in order to be successful, these stores need distributors who are willing to make deliveries scaled to their smaller size.

New farmers may not be aware of which products are suitable for sale in grocery stores. "Some bring me products that are too large or too unusual for me to sell," says one store owner. "It would be good for someone to educate them about the market perspective."

Farmers have expressed an interest in having a cooperative grocery store in Cabarrus County, a place to sell their produce. Others have said they are not interested in selling for wholesales prices. The County is exploring the potential for using existing spaces for local food retail and/or revitalization. Members of the Food Policy Council have traveled to look at other North Carolina cooperative grocery stores that could serve as potential models.

The retail market currently offers limited potential for local farmers. Local beef producers can explore the possibility of supplying the two Charlotte Earth Fare locations through Hickory Nut Gap Meats based in Buncombe County. But local produce farmers have few options for selling in grocery stores. A consumer cooperative grocery store offers one retail outlet model, but local producers must be prepared to get wholesale prices (about 30 percent less than retail) for their products.

Food Lion, a Salisbury-based grocery store, has a history of promoting sales of food produced in North Carolina.

1. Plan for ways to offer farmers training and technical assistance that will prepare them to scale production for this market
2. Continue to explore the consumer cooperative model as a way to provide a retail outlet that sells locally-grown food. Examples include the new Company Shops Market in Burlington and Chatham Marketplace in Pittsboro.
3. Build relationships with Food Lion management.

MARKETING AND DISTRIBUTION

E. Emergency Market Channel

According to Cooperative Christian Ministry resources, Cabarrus County has nine food pantries, including the Salvation Army.⁶⁶ This summary includes key points taken from telephone interviews with food pantry staff members as well as a community garden manager and a gleaning coordinator from the Society of St. Andrew, a statewide ecumenical ministry dedicated to providing hunger relief through gleaning. Questions were designed to identify demand for fresh local produce and interest in community gardens, as well as to characterize gleaning operations in Cabarrus County.

Fresh produce in demand at food pantry

In 2010 Cooperative Christian Ministry served just over 1 million pounds of food, to almost 34,000 people and 11,500 households. This was a three percent increase over 2009. The majority of what they serve is nonperishable, although they do glean farmers' markets in the summer. In 2010 they served 4,800–4,900 pounds of fresh produce. According to Cooperative Ministry staff, when fresh produce is available, it goes fast. Providing it is in keeping with the organization's effort to offer nutritious food to people who can't afford the farmers' market.

Most food is donated to the organization, which is an affiliate of Second Harvest. Last year they spent less than \$5,000 on food.

Operation Breadbasket served 1,578 families in 2010. The program does not glean from markets, but receives some fresh produce from the Society of St. Andrew. They would like to have more fresh produce to distribute, but do not have storage or refrigerator space to keep it.

Distribution presents challenges for gleaners

The Society of St. Andrew gleans produce from three farms in Cabarrus County. Crops include corn, tomatoes, squash, watermelon, cantaloupe, and turnip greens. Fields are gleaned during 11 months of the year, depending on crop availability.

The organization reports that finding enough trucks sized to haul large amounts of produce, and finding enough volunteers who can drive the produce from farm to drop point are significant challenges.

St. Andrew delivers to 250 distribution points in a 17-county region that includes Charlotte and Cabarrus County. Because most gleaning takes place during the weekend, when many agencies are closed, the organization delivers directly to neighborhoods as well, through a network of neighborhood leaders who coordinate drop points and communication with residents. These neighborhood drops are very successful, and St. Andrew is actively looking for more of them in the region.

Community gardens priority in Kannapolis

Cabarrus County has one community garden, operated by both the city of Kannapolis and First Wesleyan Church. The city's Environmental Stewardship Commission has made it a priority to support community gardens. The garden is starting its second season, and is renting plots from April 2011 to February 2012. According to a Kannapolis city employee, gardeners ate their produce and donated some of it to the Cooperative Christian Ministry. A second community garden may be opening in Kannapolis in 2011.



photo: Courtesy of Society of St. Andrews

In its state action guide, CEFS reports that enhanced gleaning is a key strategy for addressing food insecurity in low-income communities.

Marketing and Distribution

SUMMARY

People who use emergency resources are glad to get fresh produce. These organizations provide fresh produce to promote health for their clients but cannot find enough supply to meet the demand. Access to fresh foods through community gardens is also limited in Cabarrus County. In its state action guide, CEFS reports that enhanced gleaning is a key strategy for addressing food insecurity in low-income communities.⁶⁷ The Society of St. Andrew gleans annually from three farms in Cabarrus County. Distribution presents a significant challenge, because it is difficult to find both trucks and drivers suitable for hauling large amounts of produce.

Marketing and Distribution

RECOMMENDATIONS

1. Enhance gleaning efforts across the County by working closely with the Society of St. Andrew, North Carolina, which is based in Charlotte. www.endhunger.org.
2. Establish a relationship with Farmer Foodshare, a state-wide organization working to provide locally-grown food to people at risk for hunger. www.farmerfoodshare.org.
3. Build on efforts to establish more community gardens in the County.

- 1 “Table 1: County Summary Highlights: 2007,” 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_001_001.pdf (accessed June 29, 2011).
- 2 Ibid.
- 3 “Table 3: Farm Production Expenses,” 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_003_003.pdf (accessed July 5, 2011).
- 4 “Table 1: County Summary Highlights: 2007,” 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_001_001.pdf (accessed June 29, 2011).
- 5 Ibid.
- 6 “Table 30: Vegetables, Potatoes, and Melons Harvested for Sale: 2007 and 2002,” 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_030_030.pdf (accessed June 11, 2011).
- 8 “Table 1: County Summary Highlights: 2007,” 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_001_001.pdf (accessed June 29, 2011).
- 9 Calculated using data from “Table 1: County Summary Highlights: 2007,” 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_001_001.pdf (accessed June 29, 2011) and “Table 1: County Highlights: 2002,” 2002 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2008) http://www.agcensus.usda.gov/Publications/2002/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_001_001.pdf (accessed June 29, 2011).
- 9 Jennifer Curtis and others, “From Farm to Fork: A Guide to Building North Carolina’s Sustainable Local Food Economy,” (Raleigh, N.C.: Center for Environmental Farming Systems, NC State University, April 2010).
- 10 For U.S. Department of Agriculture Census purposes, the total number of operators reporting on principal employment and days worked off farm is the same as the total number of farms. In 2007, the total was 611; in 2002 it was 658. Data calculated using data from “Table 46: Selected Operation and Operator Characteristics: 2007 and 2002,” 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_046_046.pdf (accessed July 6, 2011).

- 11 "Table 46: Selected Operation and Operator Characteristics: 2007 and 2002," 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_046_046.pdf (accessed July 6, 2011).
- 12 Ibid.
- 13 Calculated using data from "Table 1: County Summary Highlights: 2007," 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_001_001.pdf (accessed June 29, 2011) and "Table 1: County Highlights: 2002," 2002 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2008) http://www.agcensus.usda.gov/Publications/2002/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_001_001.pdf (accessed June 29, 2011).
- 14 "2007 Census of Agriculture State Profile, Online Highlights, Cabarrus County North Carolina," North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Online_Highlights/County_Profiles/North_Carolina/cp99037.pdf (accessed June 30, 2011).
- 15 Calculated using data from the U.S. Department of Agriculture National Agriculture Statistics Service Quick Stats Ad-hoc Query Tool, http://quickstats.nass.usda.gov/?source_desc=CENSUS (accessed March 8, 2010).
- 16 "Table 46: Selected Operation and Operator Characteristics: 2007 and 2002," Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_046_046.pdf (accessed July 6, 2011).
- 17 Ibid.
- 18 "Table 40: Commodities Raised and Delivered Under Production Contracts: 2007," 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_040_040.pdf (accessed June 30, 2011).
- 19 Fred Kirschenmann and others, "Why worry about the agriculture of the middle? A white paper for the Agriculture of the Middle Project," Agriculture of the Middle, <http://WWW.agofthemiddle.org/papers/whitepaper2.pdf> (accessed July 5, 2010).
- 20 "Table 2: Market Value of Agricultural Products Sold Including Direct Sales: 2007 and 2002," 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_002_002.pdf
- 21 Calculated using data from "Table 1: County Summary Highlights: 2007," 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics

- Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_001_001.pdf (accessed June 29, 2011) and “Table 1: County Highlights: 2002,” 2002 Census of Agriculture: 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2008) http://www.agcensus.usda.gov/Publications/2002/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_001_001.pdf (accessed June 29, 2011).
- 22 “Table 2: Market Value of Agricultural Products Sold Including Direct Sales: 2007 and 2002,” 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_002_002.pdf (accessed June 30, 2011).
- 23 U.S. Department of Agriculture, Economic Research Service, “Farm Typology for a Diverse Agriculture,” Agriculture Information Bulletin No. 759 (Washington DC: U.S. Department of Agriculture, National Agriculture Statistics Service, September 2000) <http://www.ers.usda.gov/publications/aib759/aib759.pdf> (accessed July 5, 2011).
- 24 “Table 46: Selected Operation and Operator Characteristics: 2007 and 2002,” 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_046_046.pdf (accessed July 8, 2011).
- 25 Calculated using data from Log Into North Carolina (LINC), State Data Center, N.C. Office of State Budget and Management, http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show (accessed July 6, 2011).
- 26 Curtis and others, “From Farm to Fork: A Guide to Building North Carolina’s Sustainable Local Food Economy.”
- 27 “Table 2 Market Value of Agricultural Products Sold Including Direct Sales: 2007 and 2002,” 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_002_002.pdf (accessed June 30, 2011).
- 28 “Task Force Leadership,” Agriculture of the Middle, http://WWW.agofthemiddle.org/archives/2004/08/task_force_lead.html (accessed July 5, 2011.)
- 29 Kirschenmann and others, “Why worry about the agriculture of the middle? A white paper for the Agriculture of the Middle Project,” <http://WWW.agofthemiddle.org/papers/whitepaper2.pdf>, (accessed July 5, 2011).
- 30 Ibid.
- 31 “Table 1: County Summary Highlights: 2007,” 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_001_001.pdf (accessed June 29, 2011).
- 32 Calculated using data from “Table 11: Cattle and Calves - Inventory and Sales: 2007 and 2002,” 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics

- Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_011_011.pdf (accessed July 5, 2011) and 2007 Census of Agriculture, Online Highlights, State and County Profiles, Cabarrus County North Carolina, http://www.agcensus.usda.gov/Publications/2007/Online_Highlights/County_Profiles/North_Carolina/cp37025.pdf (accessed July 5, 2011).
- 33 “North Carolina Agricultural Statistics: 2010 Annual Statistics Book” (Raleigh, NC: N.C. Field Office of U.S. Department of Agriculture National Agricultural Statistics Service and N.C. Department of Agriculture and Consumer Services, 2011), <http://www.ncagr.gov/stats/2010AgStat/index.htm> (accessed July 6, 2011).
- 34 Debbie Bost, County Extension Director, personal conversation with author, March 31, 2010.
- 35 Ibid.
- 36 Jennifer Curtis, “Assessment & Recommended Strategies for Cabarrus County Regarding Cruse Meat Slaughter & Processing Facility & Expansion of Local Beef Markets,” (Carrboro, NC: Curtis-Consulting.com, June 2010).
- 37 Calculated using data from “2007 Census of Agriculture, Online Highlights, State and County Profiles, North Carolina,” for Anson, Cabarrus, Cleveland, Gaston, Lincoln, Mecklenburg, Montgomery, Moore, Richmond, Stanly and Union Counties, http://www.agcensus.usda.gov/Publications/2007/Online_Highlights/County_Profiles/North_Carolina/index.asp, (accessed July 5, 2011).
- 38 “Table 45: Farms by North American Industry Classification System: 2007,” 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_045_045.pdf (accessed July 5, 2011).
- 39 “Table 11: Cattle and Calves - Inventory and Sales: 2007 and 2002,” 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_011_011.pdf (accessed July 5, 2011).
- 40 “Table 2: Market Value of Agricultural Products Sold Including Direct Sales: 2007 and 2002,” 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009), http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_002_002.pdf (accessed June 30, 2011).
- 41 U.S. Department of Agriculture, Economic Research Service, “North Carolina, Mecklenburg Food Environment Data,” Your Food Environment Atlas, last updated February 9, 2010, <http://maps.ers.usda.gov/FoodAtlas/foodenv5.aspx> (accessed May 26, 2011).
- 42 “Table 1: County Summary Highlights: 2007,” 2007 Census of Agriculture: North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_001_001.pdf (accessed June 29, 2011).
- 43 Ibid.
- 44 “Sowing the Seeds: The Promise of Local Food Systems in Southeast Central North Carolina” (Chapel Hill, N.C.: Department of City and Regional Planning, University of North Carolina at Chapel Hill, May 2008) <http://www.feastdowneast.org/Research/Sowing%20the%20Seeds%20The%20Promise%20of%20Local%20Food%20Systems%20in%20Southeastern%20North%20Carolina.pdf> (accessed July 5, 2011).

- 45 “2007 Census of Agriculture, Online Highlights, State and County Profiles, Cabarrus County North Carolina,” North Carolina State and County Data Volume 1, Geographic Area Series, Part 33 (Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service, updated December 2009) http://www.agcensus.usda.gov/Publications/2007/Online_Highlights/County_Profiles/North_Carolina/cp37025.pdf (accessed July 5, 2011).
- 46 “2009 Certified County Population Estimates,” County/State Population Estimates, N.C. Office of State Budget and Management, http://www.osbm.state.nc.us/ncosbm/facts_and_figures/socioeconomic_data/population_estimates/demog/countygrowth_cert_2009.html, (accessed June 30, 2011).
- 47 Calculated using data from “Annual County Population Totals, 2010-2019,” County/State Population Estimates, N.C. Office of State Budget and Management, http://www.osbm.state.nc.us/ncosbm/facts_and_figures/socioeconomic_data/population_estimates/county_projections.shtm (access July 8, 2011) and “Projected Annual County Population Totals, 2030-2031,” County/State Population Estimates, N.C. Office of State Budget and Management, http://www.osbm.state.nc.us/ncosbm/facts_and_figures/socioeconomic_data/population_estimates/county_projections.shtm (accessed July 8, 2011).
- 48 “North Carolina,” State and County QuickFacts, U.S. Census Bureau web site, <http://quickfacts.census.gov/qfd/states/37/37025.html> (accessed July 5, 2011).
- 49 U.S. Department of Agriculture, Natural Resources Conservation Service, “Web Soil Survey” <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm> (accessed February 10, 2010) and Farmland Classification table (accessed February 11, 2010).
- 50 Debbie Bost, County Extension Director, personal conversation with author, March 31, 2010.
- 51 Ibid.
- 52 Colleen Nelson, Senior Planner at Cabarrus County Govt., email correspondence with author May 4, 2010.
- 53 Betsy Kane, Senior Planner at N.C. Department of Commerce, personal conversation with author March 30, 2010.
- 54 “Chapter Three Establishment of Zoning Districts, Cabarrus County Zoning Ordinance” (updated through June 2009), http://www.cabarruscounty.us/government/departments/commerce/zoning_ordinance/commerce_zoning_ordinance_district_establishment_chapter_3.pdf (accessed April 20, 2010).
- 55 Center for Environmental Farming Systems, “Direct Marketing,” Building a local food economy: An archive of the CEFS Farm to Fork web site,” (updated December 30, 2010) <http://www.cefs.ncsu.edu/cefsfarmtofork/wit-directmktg.html> (accessed May 26, 2011).
- 56 Robert P. King and others, “Comparing the Structure, Size, and Performance of Local and Mainstream Food Supply Chains,” Economic Research Report No. 99 (Washington D.C.: U.S. Department of Agriculture, Economic Research Service, June 2010) <http://www.ers.usda.gov/Publications/ERR99/ERR99.pdf> (accessed May 26, 2011).
- 57 U.S. Department of Agriculture, Economic Research Service, “North Carolina, Cabarrus Food Environment Data,” Your Food Environment Atlas, last updated February 9, 2010, <http://maps.ers.usda.gov/FoodAtlas/foodenv5.aspx> (accessed May 26, 2011).
- 58 National Restaurant Association, Chef Survey: What’s Hot in 2011, http://www.restaurant.org/pdfs/research/whats_hot_2011.pdf, (accessed May 26, 2011).
- 59 U.S. Department of Agriculture Briefing Room, Economic Research Service, “Table 15: Sales of meals and snacks away from home by type of outlet,” Food CPI and Expenditures, Food Expenditure Tables, http://www.ers.usda.gov/Briefing/CPIFoodAndExpenditures/Data/Expenditures_tables/table15.htm (accessed May 26, 2011).
- 60 “Cabarrus Food Environment Data,” <http://maps.ers.usda.gov/FoodAtlas/foodenv5.aspx> (accessed May 26, 2011).

- 61 U.S. Department of Agriculture, Economic Research Service, "North Carolina, Mecklenburg Food Environment Data," Your Food Environment Atlas, last updated February 9, 2010, <http://maps.ers.usda.gov/FoodAtlas/foodenv5.aspx> (accessed May 26, 2011).
- 62 This calculation is based on figures reported by Cabarrus County Staff members Paul Hunt, Mike Murphy, Anne Treanor and Tina Farmer during interviews.
- 63 U.S. Department of Agriculture Briefing Room, Economic Research Service, "Table 14: Sales of food at home by type of outlet," Food CPI and Expenditures, Food Expenditure Tables, http://www.ers.usda.gov/Briefing/CPIFoodAndExpenditures/Data/Expenditures_tables/table14.htm (accessed May 26, 2011).
- 64 "Cabarrus Food Environment Data," <http://maps.ers.usda.gov/FoodAtlas/foodenv5.aspx> (accessed May 26, 2011).
- 65 Amy Sung, "Food Lion Promotes Local Products," Supermarket News, July 16, 2007, http://www.printthis.clickability.com/pt/cpt?expire=&title=Food+Lion+Promotes+Local+Products&urlID=439287057&action=cpt&partnerID=162836&fb=Y&url=http%3A%2F%2Fsubscribers.supermarketnews.com%2Fproduce%2Ffood_lion_promotes_4%2Findex.html (accessed May 26, 2011).
- 66 Cooperative Christian Ministry, "Resources, May 2009," News, Crisis Assist Agencies, <http://www.cooperativeministry.com/images/CrisisAssistAgenciesEnglish.pdf> (accessed May 26, 2011).
- 67 Curtis and others, "From Farm to Fork: A Guide to Building North Carolina's Sustainable Local Food Economy."

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