

GROWING LOCAL

*Expanding the Western North Carolina
Food and Farm Economy*



Prepared for Appalachian Sustainable Agriculture Project (ASAP)
by Laura D. Kirby, Charlie Jackson, and Allison Perrett

August 2007

Funded by the Southern Sustainable Agriculture Research
and Education Program (SSARE), a division of the USDA

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Appalachian Sustainable Agriculture Project (ASAP) is a nonprofit organization that supports farmers and rural communities in the mountains of Western North Carolina (WNC) and the Southern Appalachians. ASAP's vision is to build a strong local food system in the region as a way to help sustain the local farm economy, preserve the rural character of the region, and support human and environmental health.

ASAP works to increase local consumption of locally-grown food and farm products through a Local Food Campaign built around public education and promotion, farmer training and support, research, and policy development. In response to the findings from this report ASAP introduced the Appalachian Grown™ program in 2006 for certifying farms and farm products grown or raised in Southern Appalachian counties on family farms. ASAP's work has contributed to rising demand for local food and farm products by consumers, restaurants, retail food stores, businesses, and institutions within the region.

Contributors:

JoAnne Berkenkamp, Consultant, St. Paul MN
Research Incorporated, Atlanta GA
The Richard L. Hoffman Center for Assessment and Research Alliances, Mars Hill College
Ken Meter, Crossroads Resource Center, Minneapolis MN
Ginger Kowal, Researcher, Appalachian Sustainable Agriculture Project

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For additional information about this research please contact Appalachian Sustainable Agriculture Project:

729 Haywood Rd., Suite 3 • Asheville NC 28806 • (828) 236-1282 • www.asapconnections.org

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Executive Summary

This report is the culmination of a multi-year research project funded by the Southern Sustainable Agriculture Research and Education (SSARE) program, a division of the United States Department of Agriculture (USDA), whose goals include advancing knowledge about sustainable farming systems. This research explores: **(1)** what food and farm products are currently produced in the region; **(2)** how much of what is produced is also consumed in the region; **(3)** the potential for increasing local consumption of locally-produced food and farm products as a way to strengthen the regional farm economy; and **(4)** where investment of resources or other actions could eliminate barriers currently impeding the purchase of local food.

The report is based on the results from twenty separate surveys commissioned by ASAP and conducted between 2003 and 2007 as well as analysis of secondary data and published statistics. Stakeholders surveyed and interviewed include consumers, farmers' market shoppers and vendors, North Carolina Cooperative Extension (NCCE) agents, farms engaged in Community Supported Agriculture, college foodservice directors, summer camp directors, child nutrition directors in public school districts, hospital foodservice directors, tourism agencies, personnel in Latino centers, dairy farmers, grocery stores, restaurants, and nursery growers. The geographic area studied is the twenty-three Appalachian counties known as Western North Carolina (WNC).

The region has a long farming tradition and, despite national trends of farm loss and agricultural consolidation, farming remains vital to this region of the Southern Appalachian Mountains. In a snapshot, WNC is home to over 12,000 farms producing a wide variety of fruits and vegetables, meat and dairy products, and non-food crops like Christmas trees, tobacco, and nursery plants. Farms occupy a third of the privately owned land in the region and in 2002 the region's farms earned \$543 million in cash receipts. Tourism, the region's number one industry, is driven largely by the scenic farm landscapes and natural beauty of the region. Taken together, these facts demonstrate the significance of agriculture to the region's economy and to issues surrounding land-use planning.

The farm economy in WNC is in a period of transition, echoing a national trend in the decline in farms and acres of farmland. To some extent change is being driven by the end of the federal tobacco price support and supply control program. Other shifts are occurring simultaneously. In the decade between 1992 and 2002, the region experienced a 16 percent increase in fruit and vegetable crops and a 25 percent increase in acres devoted to non-food crops. Direct Sales – the USDA category used to describe transactions directly between farmers and consumers – have more than doubled and are expected to continue growing, bolstered by strong demand for locally-grown food. For the region of WNC, the research finds a desire by consumers and businesses for \$36.5 million for fresh fruits and vegetables and nearly \$452 million for all foods including meat, dairy, and processed products. In this context of transition, the potential for expanding local markets for local products is significant.

In this report, the emphasis on expanding local markets for local farm products is based on an underlying assumption that local markets can improve farm profitability. Profit potential lies

in price premiums tied to strong demand for local food as well as the possibility for reduced distribution and transportation costs associated with selling to local markets. In this sense, local markets can exert a positive influence on farm profitability as well as contribute to regional economic wealth by keeping dollars spent on food circulating in the local economy.

The research found strong demand for locally-grown food by WNC consumers and across all market segments surveyed. For the majority of consumers surveyed, local food represents a fresher, tastier option to foods produced in more distant regions, and the purchase of local food represents a way to support local farmers and local communities, protect the environment, and preserve the rural character of the region. Consumers reported spending a greater percentage of their total monthly food bill on locally-grown food in 2004 compared to 2000. At farmers' markets average per capita expenditures increased from 2003 to 2004 and the percentage of weekly shoppers spending more than \$20 at the markets increased from 24 percent in 2003 to 36 percent in 2004. More than three quarters of residents surveyed said that when local foods cost a little more, they are worth the extra cost. Significantly, 82 percent of WNC respondents indicated that they would buy more locally-produced food if it were labeled local.

Strong consumer demand for local food is evident by the growth in direct-marketing opportunities for local farmers and high interest in securing locally-grown foods by larger-scale businesses and institutions in the region. To better understand and quantify market demand and establish realistic goals for sourcing local food, this study measured the level of desire to source local food by specific market segments. . It also factors in climate conditions and the seasonality of local food production.

Demand for locally-grown food is described in terms of spending: current spending, desired spending, and maximum spending. Dollar values reflect retail spending, not prices received by farmers.

Current spending refers to the amount of locally-grown produce that is currently being purchased by buyers in the region. Desired spending and maximum spending both represent the potential for locally-grown food in the region. **Desired spending** refers to the amount of locally-grown food interested buyers would purchase if they were able to get as much as they wanted. Achieving this level of spending would involve altering local food infrastructure and distribution systems so that local food could more easily reach different types of markets. **Maximum spending** represents the highest possible spending on locally-grown food by consumers and categories of large-scale buyers examined in this report. These spending levels imply infrastructure improvements plus changes in tastes and preferences so that more buyers in each category have high interest in obtaining locally-grown food.

These categories of spending are further broken down to distinguish between (1) demand for only fresh fruits and vegetables and (2) demand for all foods (i.e., fresh produce plus meat, dairy, and processed foods). This distinction is necessary when describing demand for local food in this region because more locally-grown produce is currently consumed locally than any other type of food. Produce also has less infrastructural requirements and therefore local produce sales hold better potential for increases in the short term than other farm products.

- **Current spending of locally-grown produce: \$13.9 million.**
- **Current spending of all categories of food: \$14.5 million.** This estimate is likely low due to the difficulty of distinguishing local sales of locally produced milk.

- **Desired spending of locally-grown produce: \$36.5 million.**
- **Desired spending of all categories of food: \$451.9 million.**

- **Maximum spending of locally-grown produce: \$49.9 million.**
- **Maximum spending of all categories of food: \$654.2 million.**

The greatest immediate opportunities in terms of market size lie in the retail grocery market. Nearly 60 percent of the \$2.2 billion worth of food consumed by the region's residents is purchased in retail food stores for home consumption, and retailers in the region are increasingly seeking ways to expand their local offerings. Restaurants also represent a promising market for locally-grown food with freshness and quality driving high demand for local ingredients. Beyond food stores and restaurants, the study finds high interest in local food by institutions that serve and sell food to the region's consumers, and summer camps.

Despite strong, measured demand for local food and farm products only a fraction of all food that is consumed locally is currently produced locally, probably less than one percent. This fact is true even for foods that can and are being produced by the region's farms. On the surface this represents an opportunity for local growers to expand production. More accurately, the disparity between demand for and supply of locally-grown food is complicated by the processes involved in moving food from farm to market, processing needs, and state, federal, and local policies that do not support local farms. Expanding local consumption of local farm products will require restaurants, food stores, and other businesses and institutions that serve or sell food to modify food procurement and distribution systems.

To some extent, food retailers in the region are currently altering their practices to accommodate more local food. Additionally, regionally-based systems of distribution—wholesale distributors, packers, farmer cooperatives, systems of backhauling—exist in the region that have the potential to help local farmers gain access to larger-scale markets. The region also has significant pieces of processing infrastructure including facilities for large-scale milk processing and distribution. With increasing demand for local food, these systems and pieces of infrastructure are potential points of intervention that, with further development, could create space for local farmers in a tightly integrated market.

The research confirms that there are areas where it is appropriate to expand what is currently being done and other areas where new initiatives and additional research are needed. Recommendations detailed in this report include:

- Improve outreach efforts for larger scale markets
- Improve the labeling of local food
- Provide information and support to growers
- Advocate for policies that favor local food distribution and sale

- Help maintain working farmland in the region
- Identify points of intervention in food distribution and infrastructure systems
- Expand public education and awareness about local food
- Expand the Local Food Campaign more fully throughout the region
- Integrate efforts to promote agriculture with efforts to promote tourism
- Expand direct market channels
- Strengthen partnerships among regional organizations

Within these recommendations there are many action steps that can be taken. These recommendations are part of a broad agenda for expanding local markets for local farm products in the region. Achieving a strong and successful local food system is one way to improve the profitability of WNC farms and help maintain working farmland in the region.

Introduction

This report is the result of a multi-year research project funded by the Southern Sustainable Agriculture Research and Education (SSARE) program, a division of the USDA whose goals include advancing knowledge about sustainable farming systems. The purpose of the research has been to: (1) explore what food and farm products are currently produced in the region; (2) examine how much of what is produced is also consumed in the region; (3) consider the potential for increasing local consumption of locally-produced food and farm products as a way to strengthen the regional farm economy; and (4) identify points where investment of resources or other actions could eliminate barriers currently impeding the purchase of local food. This report presents a wide-ranging collection of information on the region's food and farm economy, which can form the basis for future efforts to expand local markets for local farm products.

Research findings are based on results from twenty separate surveys conducted between 2003 and 2006 as well as analysis of secondary data. Stakeholders surveyed and interviewed include consumers, farmers' market shoppers and vendors, North Carolina Cooperative Extension (NCCE) agents, farms engaged in Community Supported Agriculture, college foodservice directors, summer camp directors, child nutrition directors in public school districts, hospital foodservice directors, tourism agencies, personnel in Latino centers, dairy farmers, grocery stores, restaurants, and nursery growers. The geographic area studied is the twenty-three Appalachian counties known as Western North Carolina (WNC).

Underlying the research is the assumption that local markets can improve farm profitability. The profit potential lies in price premiums tied to strong demand for local food as well as the possibility for reduced distribution and transportation costs associated with selling to local markets. The data collected for this report are used to quantify demand and offer a sense of the potential for local consumption of local farm products in the region as well as to evaluate the effectiveness of ASAP's efforts to rebuild the local food system. While the report relies on many assumptions and complex formulas to generate estimates of current and potential demand, the intent is to show, in numbers, the relative importance of various market channels and help identify places where an investment of resources can foster meaningful change in the local food and farm economy.

Additionally, this research recognizes that there are differences in the price of food at different points in the transaction chain from farm to table. *Retail value* indicates the amount that consumers pay for food and *wholesale value* is what businesses or organizations would pay for the food. A third value, *farm value*, reflects the amount that farmers receive for the food they sell. Farm value is often referred to as a percentage of the retail price of food in the report and careful attention is paid to naming the value being represented so that comparisons can be made across categories and a single figure (or range) can be calculated to describe the local food system in dollars.

While this project is large and covers many topics relevant to expanding the farming economy of WNC, food is the primary focus. Other crops, while significant to WNC's farming economy (e.g., nursery crops and Christmas trees), are not included in the tables or figures describing local market potential for local farm products. How much consumers and

businesses in the region value locally-produced items that are not food (i.e., would be willing to pay more for them) and how interested producers of those crops are in shifting to local markets is uncertain. To help answer these questions, additional research is needed. The wine industry is another relatively large and growing sector of the region's agricultural economy that is only briefly covered.

These omissions are beyond the scope of this research and reflect a concentration on fresh produce. The produce focus is based on growth in sales of fresh fruits and vegetables through direct marketing channels over the course of ASAP's Local Food Campaign. A major purpose of this study has been to move beyond the direct marketing focus and quantify the potential in higher volume markets. Accordingly, the report includes a bias towards larger-scale markets. The infrastructural and distribution issues associated with the expansion of larger-scale markets are emphasized, for example, more than infrastructure issues involved in supporting the development of new or expanded Community Supported Agriculture programs (where consumers buy a share of a farm's output before the season starts) or on-farm retail.

Section 1 of the report provides a comprehensive look at the food and farm economy of WNC using data from the United States Department of Agriculture (USDA), the North Carolina Department of Agriculture and Consumer Services (NCDA&CS), and other places. The Census of Agriculture conducted by the USDA every five years is the primary data source. This section also examines history and trends, which influence farm production in the region, and explores the influence of local markets on farm profitability.

Section 2 addresses consumer demand for locally-grown food in the region. Using a combination of market surveys and data from secondary sources, demand is described for both consumer markets and larger-scale markets. Overall, strong consumer demand for local food is evident in high demand by the growth in direct-marketing opportunities for local farmers and high interest in securing locally-grown foods by larger-scale businesses and institutions in the region.

The information about market demand in Section 2 focuses mainly on locally-grown produce and excludes meat, eggs, dairy products, and other processed farm products. This distinction reflects the reality that the current local food system in WNC is largely made up of fruit and vegetable sales to consumers and organizations in the region. In the short-term, fruits and vegetables hold the greatest potential for being made available to local markets due to the reduced infrastructure requirements for produce compared to livestock, poultry, and animal products.

In **Section 3** the focus of the report is broadened from produce to include meat, eggs, dairy, and other processed farm products. The supply of various types of food produced in the region is assessed along with some discussion about what it takes to move each type of product from farm to market.

Section 4 describes barriers or challenges to a strong local food system in WNC. This section draws on additional information gathered from tourism and North Carolina

Cooperative Extension professionals as well as representatives from nonprofit and academic organizations working to strengthen the local food system in the broader southern Appalachian region.

Section 5 provides a set of recommendations for bridging the gap between supply and demand of local food and farm products. The recommendations represent action steps that can be taken to build on the region's strengths and resources and overcome many of the identified barriers and challenges. This section acknowledges that linking local growers with local markets involves a complex interplay of demand, supply, and infrastructure.

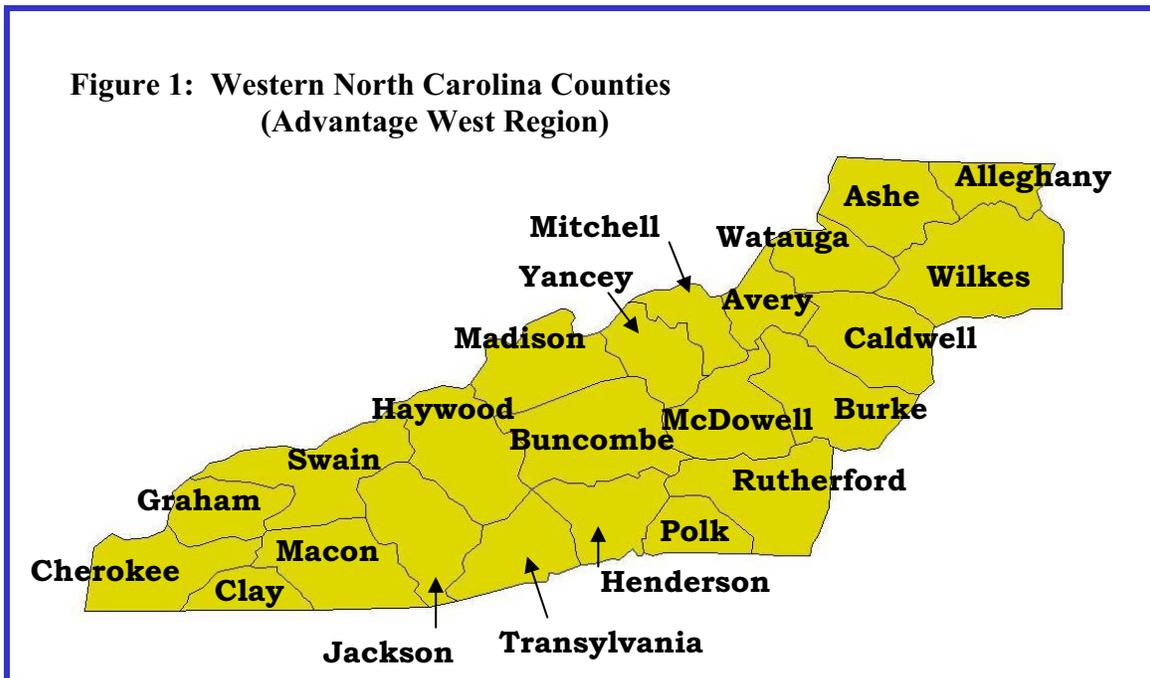
Further details about the research are available in several Appendices. Appendix A includes twenty individual reports based on surveys and other research conducted between 2003 and 2007. Appendix B includes six case studies, which are designed to illustrate issues discussed in the report. Appendix C includes a review of the work ASAP has done in five years of operating its Local Food Campaign. Appendix D briefly describes related research in the region.

SECTION 1: The Western North Carolina Food and Farm Economy

Agriculture is one of the largest industries in North Carolina. The state ranks 8th nationally in farm income with \$7 billion of farm products marketed in 2002, the year of the most recent USDA Census of Agriculture.¹ A total of 53,390 farms were operating in the state in 2002 on 9.1 million acres. The average farm size in North Carolina in 2002 was 170 acres, with the state's largest farms concentrated in the eastern part of the state.

North Carolina is organized by the state into seven regional partnerships for economic development purposes. Western North Carolina is defined as the 23 counties included in the Advantage West region of the state (see map). Besides the Advantage West region, there is the Piedmont Triad region, the Charlotte region, the Research Triangle region, the Eastern region, the Northeast region, and the Southeast region.

The Advantage West region has approximately 1 million residents, including more than 13,000 farmers. Rapid population growth in the 1990s marked a change from the previous decade when much of rural NC grew slowly or not at all. The population in the Advantage West region grew by 17% from 1990 to 2000, mostly due to in-migration. The fastest growing ethnic group was Hispanics, which increased from 5,342 to 29,106 over the decade. Still, Hispanics represent only a small portion of the region's total population at just fewer than 3%.²



¹ The USDA Agricultural Census is conducted every five years. The most recently released data is from 2002. Throughout this report, data is from 2002 unless otherwise indicated.

² Demographic information in this paragraph comes from a summary of census data provided by the NC Rural Center (www.ncruralcenter.org)

Twenty-two of the twenty-three counties in WNC are classified as rural. Per capita income was just over \$18,000 in the Advantage West region in 2000, compared to a high of around \$23,000 in the Research Triangle region and a low of \$16,000 in the Northeast region. Despite improvements since the 1960s and 1970s, poverty remains high in rural WNC.

The region is home to 12,212 farms, close to one quarter of North Carolina's total. Small farms predominate in the region, with more than half of all farms operating on fewer than 50 acres. Average farm size in WNC is 85 acres, approximately half the state average and one quarter of the national average farm size. Farming is nevertheless a substantial contributor to the economy, with \$543 million in agricultural receipts reported in the region in 2002.

Chapter 1: A Brief History of Farming in the Region³

Farming in WNC has never been easy. In a land of fertile and loamy river valleys and craggy inhospitable highlands, the region's farmers have always been faced with unique challenges and blessings related to topography. Historically, just as today, farming in the mountains required balancing the limits of the land with the availability and demands of the market.

The first European immigrants to the region brought traditional farming methods from their homelands. The largest group of immigrant settlers to the area, the Scotch-Irish, began arriving in large numbers in the valleys and coves near the French Broad River after the Revolutionary War. They brought a tradition of simple farming tools, independence, and an ability to adapt to challenging conditions. Consequently, they adjusted well to the isolation and dependence on subsistence farming required during the earliest years of European settlement.

The typical homestead of settlers of the late 18th and early 19th centuries consisted of mixed farming of crops and livestock. The crops, primarily Indian corn, were fenced and the livestock left to forage in the woods and fields. Transportation was extremely limited across most of the mountain region, meaning that the majority of farmers grew only what they needed for their own families. Most mountain crop fields were small, tucked into the narrow valleys between mountain ridges. The rich mast of the Appalachian forests made it possible for livestock to be raised for little cost on public lands. As roads gradually opened the region to outside markets, the majority of the mountain region remained largely isolated from the larger state and national economy.

The French Broad River served as a natural route for trade that farmers of the region used to carry their goods to market. In 1827, the creation of the Buncombe Turnpike linked the region to national livestock markets with dramatic results. Mountain farmers responded by driving ever more livestock and fowl to market on the new turnpike along the French Broad River. Upwards of 175,000 hogs were driven along the road yearly during this period as well as numerous mules, ducks, turkeys, and cattle. The farmer was able to turn the bulky corn crop, still the most prevalent crop, into higher value meats that could be walked to market along the turnpike road. Whiskey also added value to the corn while reducing its bulk so that one horse could carry the equivalent of eight bushels of corn to market in a liquid form.

In the period leading up to the Civil War, most of the farms along the river continued to survive through a mixture of subsistence and market farming. The coming of the Civil War in the late 1800s devastated the South economically and diminished the number of farmers and farms in the mountains. The end of the war also saw the end of the great drives along the

³ Sources for this section include:

- Ager, John Curtis. *We Plow God's Fields: The Life of James G. K. McClure*. 1991. Appalachian Consortium Press: Boone, NC.
- Blethen, T. *From Ulster to Carolina: The Migration of the Scotch-Irish to Southwestern North Carolina*. 1983. Western Carolina University Mountain Heritage Center: Cullowhee, NC.
- Dykeman, W. *The French Broad*. 1955. Holt, Rinehart & Winston: Austin, TX.

Buncombe Turnpike. New railroads brought livestock from the American west to supply markets the mountain farmers had depended on, helping to end the era of the great drives.

Huge numbers of small-scale farmers turned their land to cultivation of Bright Leaf tobacco after the Civil War. With this valuable crop, which grew well in the mountain soil and could be stored without loss of quality until the farmers could transport it to market, land values increased and the region acquired a reputation for excellent tobacco. But by the end of the century, tastes for tobacco changed and the harsh Bright Leaf no longer met the desires of the market. Production declined and once again the resilient farmer returned to subsistence farming and growing other crops that kept small farms in production while tobacco markets were unavailable. By 1923 Burley tobacco made tobacco growing profitable again and its production would continue to strongly influence the regional economy for most of the rest of the century.

By the 1920s the forests of the Southern Appalachian region were virtually gone. Whole mountains had been logged which meant the end of some farmers' practice of allowing livestock to range freely in the forests. Industrialism touched the mountains by shifting the sources of income off the farm. In the late 1800s farming was still the primary source of income for the mountain family. However, by the end of the 1930s most farms had declined in size and farming became a part time venture. In the 1930s the national depression dried up many of the farmers' markets. The ever-resilient mountain farmer resorted to the subsistence farming that had seen the Appalachian agricultural community through settlement and into the twentieth century.

The 1930s also saw an increased government presence in the region with the purchase of the national forests and the Great Smoky Mountains National Park, as well as the activities of many New Deal agencies. Rural electrification, government agricultural departments, and tourism brought the region in closer contact with the rest of the country. The emergence of farmers organizations such as the Farmer's Federation and the Grange led to new interests in commercial farming and united many farmers to work together to explore all possible means of preserving farming as a way of life in the region.

As national industrialization and consolidation of the food system began with World War II and proceeded through the 1970s and 80s, mountain farmers were increasingly left out of widening distribution chains and farm consolidations. The topography of the mountain land made it impossible for most family farms to expand to the scale attained by farmers in other parts of the state and country. Transportation along winding mountain roads remained an obstacle for the region's farmers. Burley tobacco provided a stable and resilient crop that kept many mountain farms in production, until the tobacco buyout in 2004 removed much of the support for growers in this market. Once more, mountain farmers today are challenged with adapting to the demands of larger markets using the resources available to them.

Chapter 2: Current Production

The total land area in WNC is 9,642 square miles, or 4,442,880 acres. About 1.5 million of those acres are protected public lands, which leaves almost 3 million acres of land for private use. In 2002 just over a third of that land – 1,056,566 acres – was farmland. The majority of WNC farmland, approximately 60% of the total, includes woodland and other land used for pasture and grazing for farm animals. In fact, raising animals for food and dairy products is a significant part of the farm economy in the region, with more than half of all farms reporting cattle, hogs, sheep or chickens in inventory in 2002. A breakdown of WNC farms by category of farm products is provided below.

Category	Number of Farms
Meat and dairy	7165
Tobacco	1959
Christmas trees	1352
Horticultural crops	1197
Fruits and Vegetables	995

Source: USDA Census of Agriculture, 2002

The remaining 40% of WNC farmland, approximately 450,641 acres, was counted as cropland in 2002. Approximately half of that was harvested cropland, with the remainder made up of cropland used for pasture or grazing, cropland used for cover crops or in cultivated summer fallow, and cropland that was idle or not harvested that year. Table 2 shows the various crops produced on the approximately 231,000 acres of harvested cropland in 2002.

Category	Acres	% of Total
Crops grown primarily for animal feed or processing (corn for silage, corn for grain or seed, wheat for grain, soybeans, hay)	167,078	72%
Cut Christmas trees	29,133	13%
Nursery, floriculture, greenhouse, short-rotation woody crops	12,680	6%
Orchards, including apples, cherries, figs, grapes, peaches, pecans, plums & prunes, pears, other fruit and nuts	8,131	4%
Vegetables	7,284	3%
Tobacco	7,282	3%
Berries, all types	114	<1%
Total harvested cropland	231,702	100%

Source: USDA Census of Agriculture, 2002

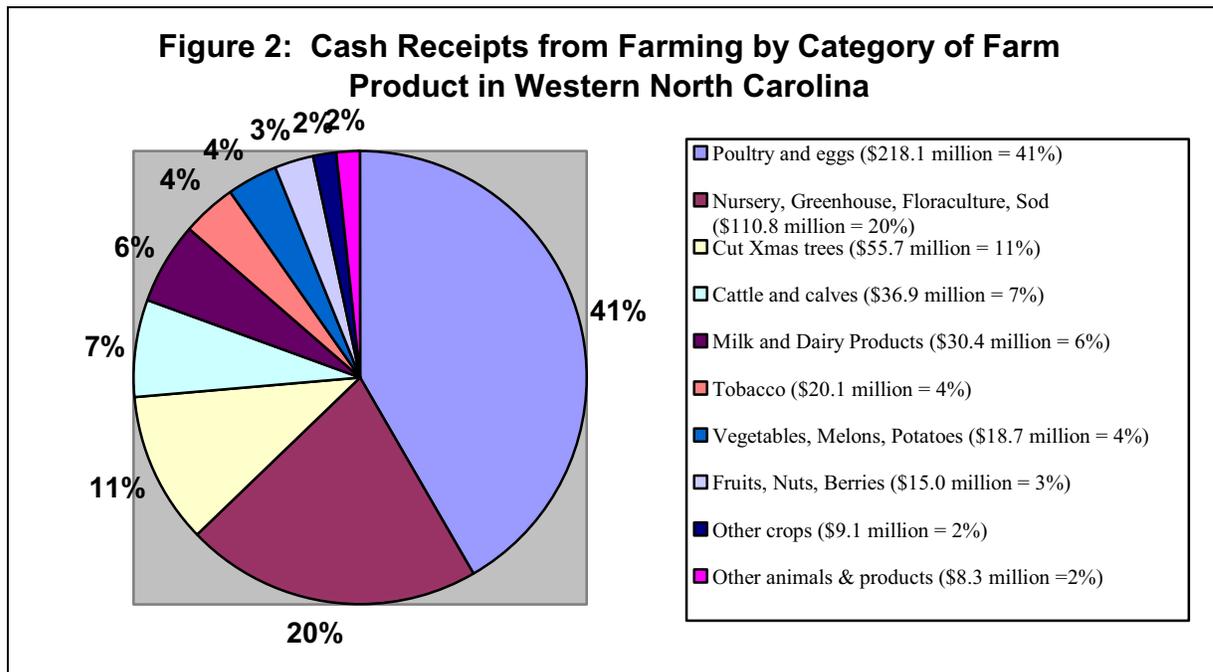
Chapter 3: Cash Receipts from Farming

Livestock, poultry, and their products accounted for more than half of agricultural receipts in the region in 2002.

Product Category	Value	Percentage
Value of crops including nursery and greenhouse	\$234,058,000	43%
Value of livestock, poultry and their products	\$308,627,000	57%
Total	\$542,685,000	100%

Source: USDA Census of Agriculture, 2002

Poultry and egg sales were the largest contributor to this total, accounting for nearly 42% of all cash receipts from farming that year. The majority of those sales occurred in Wilkes County where a large, commercial chicken processing facility operates. Within the crop category, nursery products and cut Christmas trees accounted for the largest portion of cash receipts, followed by tobacco, vegetables and then fruits, nuts and berries.



Source: USDA Census of Agriculture, 2002

Updated WNC Agricultural Statistics through 2004

The NCDA publishes agricultural statistics for the state and, to a more limited extent, for individual counties each year. Those figures indicate that total cash receipts from farming in WNC increased 67% from \$543.3 million in 2002 to \$907.8 million in 2004. A detailed breakdown by category of farm product is not available, but nearly two thirds of the increase can be accounted for by a \$187.7 million increase in cash receipts from nursery and greenhouse crops and a \$16.7 million increase in receipts from vegetable, fruit, nut and berry sales between 2002 and 2004. Cash receipts from tobacco declined during the period from \$20.1 million to \$13.8 million.

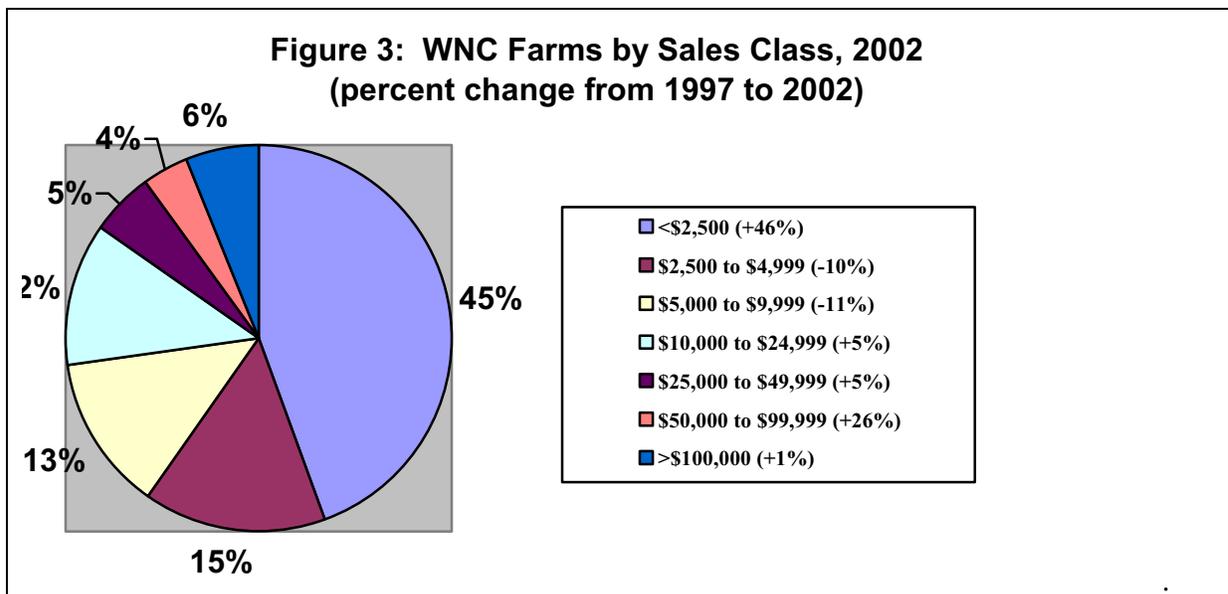
Chapter 4: Trends in Farming and Farmland

Those numbers give a snapshot of the WNC farm economy. A fuller picture emerges when trends and their effect on production are examined.

Decline in farms and acres of farmland

The number of farms nationwide has declined dramatically since the peak of nearly 7 million in 1935, with most of the decline occurring during the 1940s, 1950s, and 1960s. The decline in farm numbers still continues, but at a slower pace. In 2005, the number of farms in the U.S. was estimated at 2.1 million, 0.6% fewer than in 2004.⁴ In North Carolina, the number of farms has dropped from a peak of 302,000 in 1948 to 48,000 farms at the beginning of 2006. In both 2004 and 2005 North Carolina tied Florida and Tennessee for first place in the nation in terms of farm losses.

The largest decline in farms nationally has occurred in the category of farms with sales between \$10,000 and \$249,000.⁵ The number of farms in the highest and lowest sales classes have actually increased, reflecting both heightened consolidation among America's large farms and the proliferation of direct markets as sales outlets for small-scale farms. Figure 3 shows a breakdown of farms by sales class in WNC and the percent change in each category of sales class between 1997 and 2002. In this region, where most farms are small, the category of farms with sales lower than \$2,500 or higher than \$9,999 increased, but the number of farms with sales between \$2,500 and \$9,999 decreased.



Source: USDA Census of Agriculture, 2002

⁴ *Farms, Land in Farms, and Livestock Operations: 2005 Summary*. February 2006. National Agricultural Statistics Service.

⁵ *Ibid.*

While some farm losses in WNC are linked to consolidation among farms, the absolute amount of farmland in the region has also been declining. In Western North Carolina, there were approximately 12% fewer acres of farmland in 2002 compared to 20 years ago. The number of farmers in the region has also declined dramatically in recent decades, from 76,065, or 11% of the region's population in 1970, to 13,243, or just over 1% of the population in 2000.⁶

Aging of the farm population

According to the USDA the average age of farmers has been increasing every year since 1978. The average age of all U.S. farm operators has been greater than 50 years of age since at least the 1974 census, and the national average in 2002 was 55.3 years of age.⁷ Definite relationships exist between age of farm operator and certain farm characteristics. For example, family farms typically have older farm operators than corporate farms, and farms in smaller income classes typically have older farm operators than larger income class farms.⁸ With the high concentration of small family farms in the region, it is not surprising that the average operator age in 2002 was higher than the national average in all but three of the 23 counties.

Beginning in 2002 the USDA began gathering additional information about farm operator characteristics to help clarify issues related to the aging of the farm population, such as farm succession plans and the extent to which young farmers are replacing older farmers as they retire from farming. The new data indicate that only about 9% of all farms nationwide had multiple operators from different generations working on their farms as farm operators. The likelihood of having multiple operators is significantly lower for lower income class farms that predominate in this region. According to a 2006 survey of North Carolina Cooperative Extension agents, the aging of the farm population is one of the top issues affecting the future of farming in the region.⁹

The tobacco buyout and related shifts in production

The single largest influence on the North Carolina farm economy in recent years is commonly referred to as the 2004 tobacco buyout. Partial effects of the buyout began in the mid-1990s as growers began anticipating the end of federal tobacco support. Quota cuts and falling prices during the 1990s also contributed to a changing landscape of tobacco production in the region.

The buyout refers to Fair and Equitable Transition Act passed by Congress on October 22, 2004. The legislation eliminated federal price support and supply control programs which had regulated tobacco production and marketing since the Great Depression era. It opened

⁶ *Census of Population and Housing*. Various years. US Bureau of the Census.

⁷ *2002 Census of Agriculture*. National Agricultural Statistic Service, USDA.

⁸ *What We Know About the Demographics of US Farm Operators*. 2005. National Agricultural Statistics Service, USDA.

⁹ *A Survey of NC Cooperative Extension Agents in Western North Carolina*. 2006. Appalachian Sustainable Agriculture Project: Asheville, NC. (Appendix A)

tobacco to an unregulated, free market system beginning with the 2005 crop. Payments to growers and quota owners under the tobacco buyout are scheduled to take place over ten years, which means that the full effects of the buyout will not be known for some time.

For North Carolina, number one in the U.S. in the production of tobacco with 36% to 38% of total tobacco production, the impact of the buyout will be dramatic. Some experts estimate that as many as five out of six farmers growing tobacco will need to find another way to earn a living and that the majority of small-scale farms growing tobacco under the old system will no longer be viable in the tobacco market.¹⁰

There have been significant decreases in tobacco production across the state beginning in the mid-1990s. In the decade between 1992 and 2002, WNC experienced a 36% decrease in the number of acres devoted to tobacco – from 11,360 acres to 7,282 acres – and a reduction in the number of farms growing tobacco from 4,133 to 1,959.¹¹ By 2005, total tobacco acreage in the region had fallen even further, to 2,530 acres.¹²

With many regional farmers exiting tobacco production, there is a tremendous need and opportunity to shift farm production into different crops and markets. These shifts are occurring in a variety of areas. Between 1992 and 2002 the region experienced a 25% increase in acres devoted to non-food crops, split about evenly between horticultural crops (not including Christmas trees) and all other field crops. Fruit and vegetable acreage increased more than 16% in WNC from 1992 to 2002. While the number of farms with cattle and hogs declined during this period, the number of farms with chickens and sheep increased such that the overall number of farms raising animals for meat and dairy products remained relatively stable. Farm products sold directly to individuals for human consumption (“Direct Sales”) more than doubled between 1992 and 2002 from \$1.5 million to \$3.1 million. While the absolute amount of Direct Sales remains small, the increase is significant in looking at shifts in production from tobacco to other crops.¹³

Consolidation in the food system

Over the past four decades, concentration in the ownership and management of food production and marketing has dramatically restructured the agricultural and food industries in the U.S. and globally. Horizontal and vertical integration, mergers and acquisitions, and the use of supply chain management strategies are the mechanisms by which change has occurred.¹⁴ The result is that fewer but larger companies have come to dominate each stage of production, processing, and distribution:

- In production, the amount of farmland nationwide has not decreased in recent decades as much as the number of farms, leaving the remaining farms with larger average acreage. In 2003, large commercial farms – defined as those with annual

¹⁰ *The Agricultural Reinvestment Report*. 2006. Rural Advancement Foundation International-USA.

¹¹ USDA Census of Agriculture, various years.

¹² NCDA, Agricultural Statistics Division.

¹³ Entire paragraph: USDA Census of Agriculture, various years.

¹⁴ For a fuller discussion of these issues, see *The Infrastructure of Food Procurement and Distribution*. 2007. Appalachian Sustainable Agriculture Project: Asheville, NC. (Appendix A)

sales above \$250,000 – produced about 70% of total farm sales but only represented 7% of all U.S. farms.¹⁵

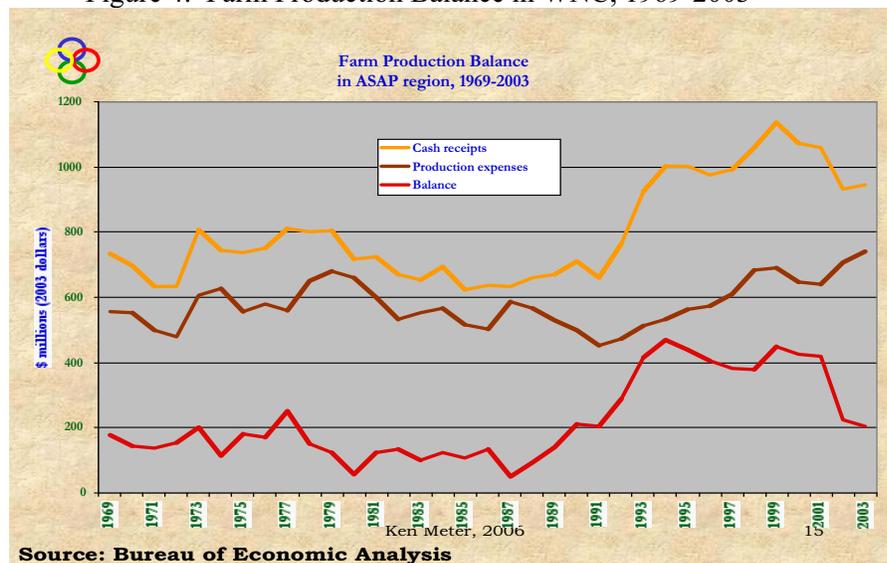
- In food manufacturing, the top 20 companies' market share increased from 36% of industry sales in 1987, to almost 44% in 1992, to 51% in 1997.¹⁶
- In the wholesaling sector, the top four general line wholesalers—which distribute a full line of food and nonfood products—increased from 26% of the market share in 1987 to nearly 41% in 1997.¹⁷
- In food retailing, the top ten grocery store chains accounted for nearly 70% of sales in 2005 compared with 53% in 1999.¹⁸

Consolidation in retail and wholesale markets makes it increasingly difficult for small farmers to maintain their market share.

Chapter 5: Economic Considerations

Farm Production Balance (FPB) is a term used to describe the profitability of farms.¹⁹ It equals cash receipts from farm sales less the costs of producing farm products. This is an aggregate measure, not an individual farm measure. Charting the FPB over time shows that farms in this region have earned a surplus from farming each year for at least the past 20 years. In Figure 4, the FPB is represented by the bottom line on the graph, which is the difference between cash receipts from farming and production expenses each year. Many other regions have shown a negative FPB during some or all of these years.

Figure 4: Farm Production Balance in WNC, 1969-2003



¹⁵ MacDonald, J., R. Hoppe, and D. Banker. *Growing Farm Size and the Distribution of Farm Payments*, Economic Brief Number 6. 2006. Economic Research Service, USDA.

¹⁶ Harris, J. M., Kaufman, P., Martinez, S. and C. Price. *The U.S. Food Marketing System, 2002. Competition, Coordination, and Technological Innovations into the 21st Century*. 2002. Economic Research Service, USDA.

¹⁷ Ibid.

¹⁸ *Food Industry Consolidations*. 2006. Produce Marketing Association.

¹⁹ Ken Meter, Crossroads Resource Center.

The long-term profitability of the region's farms (in aggregate) may be due in part to the fact that they are less tied to commodity programs than farms in other regions, particularly the grain belt regions in the Midwest and even in the eastern part of North Carolina. Decreased reliance on tobacco may actually contribute to a stronger farm economy going forward if tobacco growers are able to shift to other high value crops and markets.

It is important to note that while the region overall maintains a positive Farm Production Balance, many individual farms are losing money. In fact, more than half of WNC farms reported net losses in 2002. It is not uncommon for small family farms to lose money. In fact, some small farms stay in farming for reasons other than profitability, such as continuing a family tradition or maintaining a rural lifestyle.²⁰ Long term sustainability of the farm sector, however, depends on improving the ability of regional farms to be profitable.

The ability of individual farms to earn a profit depends on their ability to increase total revenues and/or lower total costs. Revenue streams and costs of production vary substantially by product. Meat prices, for example, are much higher per pound than vegetable prices, but the costs of production are also much higher. Revenues are driven by prices, which are largely out of producers' control, but it is possible for producers to earn higher prices in local markets if buyers are willing to pay a premium for locally-grown food.

Farmers might also earn higher prices by selling directly to buyers – consumers or businesses – rather than to intermediaries, such as packers, wholesalers and distributors. Whether or not that translates into higher profits depends on the extent to which transaction costs also increase. Transaction costs include everything from harvesting to packaging to marketing farm products and vary according to how or where products are sold.

The emphasis on expanding local markets for local farm products in this report is based on an underlying assumption that local markets can both increase the market value of farm products – by enabling farmers to earn a premium for locally-grown foods – and reduce total costs by shortening the transaction chain between farmers and markets.

²⁰ *Structural and Financial Characteristics of U.S. Farms: 2005 Family Farm Report*. 2006. Economic Research Service, USDA.

Cane Creek Valley Farm: Catching Up to Stay in Place

On the century-old dairy farm along Cane Creek near Asheville where she and three past generations of her family were raised, Amanda Sizemore is making a bold transition to keep the family farm together. Amid declining profits for milk and rapidly encroaching development in the valley, she and her father, George Nesbitt, have decided that organic vegetable production can offer the profit margin needed for the family to stay on the farm. The transition from dairy operation to vegetable growing involves infrastructure shifts and drastic changes in marketing. After selling most of her organic vegetables at an on-farm produce stand for one season, Amanda has begun to deal with brokers and retailers on the wholesale market and is finding ready demand for her produce. She discovered that customers at the farm stand are looking for different qualities in vegetables than wholesale buyers, and that farmers must be equipped to find buyers for the produce that they grow. Finding a rewarding place on the farm for every member of her large family is the goal that drives Amanda's transition into a new realm of farming.



Read the full case-study, page 17B

Chapter 6: Regional Strengths and Resources

This chapter reviews conditions that can be considered strengths or resources for advancing the development of the local food system in WNC. The information comes from two surveys of professionals working on agriculture issues in the region:

- One is a survey of North Carolina Cooperative Extension (NCCE) agents.²¹ Agents representing 22 counties in WNC completed a mail survey.
- The second is a survey of 22 professionals working in nonprofit organizations and academic institutions throughout the broader southern Appalachian region to advance local and regional food systems in their communities. The individuals are referred to as local food advocates.²²

Strong Demand

Strong demand for local food and farm products was overwhelmingly the top category of asset named by local food advocates. Survey respondents described strong demand in both consumer markets and larger scale markets. One program director summarized this sentiment by acknowledging that “demand is high, this is generally not a hard sell.” Another said, “There is a larger market than was originally anticipated – that includes mainstream grocery stores.” Overall, more than two thirds of local food advocates surveyed made some reference to strong demand when asked to name strengths of the local food movement in Southern Appalachia.

NCCE agents also described significant growth in local markets and a high level of interest among residents in buying local farm products. Almost 30% of agents surveyed named strong demand as an asset for the local food system.

Good Growing Conditions

Respondents to both surveys acknowledged that the region’s farmland is suitable for growing a wide variety of crops, that the climate affords a long growing season, and that there is still a significant amount of land in production or with good potential for being in production in the region. This was the top category of asset named by NCCE agents, and every single agent completing a survey named at least one type of food with good potential for new or expanded production in their county. Some survey respondents also referred to the beauty of the region’s farms and farmland as regional assets in terms of their value for tourism.

Characteristics of the Region’s Farmers

²¹ *A Survey of Cooperative Extension Agents in Western North Carolina*. 2007. Appalachian Sustainable Agriculture Project. Asheville, NC. (Appendix A)

²² *A Survey of Local Food Activities in the Southern Appalachian Region*. 2006. Appalachian Sustainable Agriculture Project. Asheville, NC. (Appendix A)

In describing farmers as a source of strength for the regional food system, NCCE agents emphasized the strong farming tradition and work ethic of the region's farmers. Local food advocates made comments like "farmers here are progressive" and "farmers here have been able to make transitions throughout history – this one should be manageable too." Altogether, more than half of respondents in each group included this item as a regional asset.

Nonprofits and Farm Support Services

A number of survey respondents recognized the strong network of nonprofit and university-based organizations (including NCCE) working on local food issues as a real strength for the region in terms of rebuilding local food systems. One respondent summarized this by saying, "We have many committed, determined people working on it."

What type of support is available for farmers in WNC?

Government Agencies

United States Department of Agriculture (USDA). The USDA is the Federal executive department charged with developing and executing policies on farming, agriculture, and food. Specific agencies focus on agricultural research and education; marketing of U.S. agriculture products; food safety and inspection; natural resource protection and conservation; health and care of animals and plants; economic support of U.S. producers; collecting and publishing statistical information relevant to the agricultural sector; and rural development.

Farm Service Agency (FSA). FSA is the USDA lead agency that manages and administers farm commodity, crop insurance, credit, environmental, conservation, and emergency assistance programs for farmers and ranchers through a network of federal, state, and county offices. State and county offices certify farmers for farm programs and pay out farm subsidies and disaster payments.

Natural Resources Conservation Service (NRCS). NRCS is the USDA lead agency that assists with the conservation, maintenance, and improvement of natural resources and the environment. Farmland protection is one major NRCS activity area. County-based NRCS staff work directly with farmers, ranchers, land-owners, and divisions of state and local government. In North Carolina, the state office is located in Raleigh. An area office is located in Waynesville and county offices are located throughout the state.

North Carolina Department of Agriculture and Consumer Services (NCDA&CS). Based in Raleigh, NCDA&CS provides a variety of services, programs, and technical assistance to farmers and agribusinesses with the goal of improving the overall state of agriculture in NC. Specific divisions collect, prepare, and disseminate statistical information relative to North Carolina agriculture; work to improve production efficiency and protect natural resources; offer services to mitigate the impact of natural and man-made disasters; coordinate the collection, storing, and distribution of USDA donated foods to primary and secondary schools, private schools, charitable institutions, and needy households; work to develop and expand markets for NC products; and protect public health and safety by regulating industries involving agricultural products.

Continued next page

North Carolina Cooperative Extension (NCCE). NCCE is based at two land-grant universities – NC State and NC A&T State University, in all 100 NC counties, and on the Cherokee Reservation. University-based extension specialists provide training and technical assistance to extension agents working in counties throughout North Carolina. County personnel provide education to the public as well as education and services for producers. Specific programs for farmers include a Specialty Crops Program, which helps growers diversify and develop new income sources by teaching them how to produce and market high value specialty crops.

Non-profit Organizations

North Carolina Farm Bureau. North Carolina Farm Bureau (NCFB) is a private, non-profit organization that promotes farm and rural issues in North Carolina through government relations, marketing, field representation, agricultural education, member services, and other programs. Organized in 1936, NCFB has the goal of protecting the interests of farmers and rural families and has served as a policy advocate—on behalf of farmers and private landowners—on commodity, environmental, and regulatory issues. NCFB has a large educational component that provides opportunities to broaden the knowledge and leadership capabilities of farmers, with special programs directed toward young farmers, ranchers, and women. Offices are located in all 100 North Carolina counties.

Other nonprofit organizations. Many nonprofit organizations are working to support farmers in the region through a variety of programs and services including: farmer education and capacity-building; referral and debt management services to small farmers; policy advocacy; public educational activities to raise awareness about issues affecting local farms; work to develop collaborative marketing, distribution, and processing channels; assistance to landowners to protect farmland, wild habitats, and watersheds; and rural economic development activities.

Commodity Associations

North Carolina commodity associations represent the interests of producers and work variously to improve NC agriculture through public promotion and educational activities; policy advocacy; and educational programs for growers. There are dozens of associations representing commodities produced in NC.

Chapter 7: Food and Non-Food Crops

Nursery products make up a substantial part of the farm economy in the region. Nearly 20% of harvested cropland was used to grow Christmas trees and all categories of nursery crops in 2002 and sales of those products accounted for just over 30% of the \$543 million cash receipts from farming in the region that year.²³ Christmas tree sales contributed approximately \$56,000 to the total and sales of all other nursery crops generated nearly \$111,000 in cash receipts. Despite the relative importance of these crops to the region's agricultural economy, little is known about local demand and local markets for non-food crops. They are not included in the market potential calculations that occupy Sections 2 and 3 of this report.

²³ 2002 *Census of Agriculture*. National Agricultural Statistic Service, USDA.

To explore the question of whether nursery crops could benefit from a local campaign similar to the one used for promoting locally-grown food a survey of farms producing nursery crops in the region was conducted during the summer of 2006.²⁴ The goals of the survey were to explore the applicability of a local label for trees, shrubs, and plants grown in the region and to explore interest among producers of those crops in expanding sales to local markets.

Given substantial differences in how Christmas trees and other types of nursery products are produced and marketed in NC, the decision was made to limit the survey to nursery growers that were not exclusively selling Christmas trees. For the survey, a mailing list was generated using directories from various trade organizations and from the NCDA&CS producer database. A total of 469 nursery growers were identified and mailed a written survey asking about the products they grow and issues related to marketing their products locally. 109 surveys were returned for a response rate of 23%.

The largest category of crop grown by survey respondents was nursery stock – which includes many different types of plants grown for sale in retail and wholesale nursery outlets – followed by cut Christmas trees, herbaceous perennials, short-rotation woody crops, and foliage plants. Nearly a third of the nursery growers reported that they also grow other types of farm products. Interest was high among survey respondents in pursuing *Appalachian Grown*[™] labeling and advertising. More than 60% of respondents indicated that they would like to be contacted about using the label and/or being listed in ASAP's *Local Food Guide*. And nearly 70% said they thought sales of nursery products would benefit from *Appalachian Grown*[™] labeling and advertising (see p. 26 for a description of the *Appalachian Grown*[™] certification).

Just over half of nursery growers completing a survey reported that they currently sell to retailers, wholesalers, or consumers within the region and 61% reported selling to retailers, wholesalers, and consumers in other regions. When asked about their interest in expanding sales to local markets, more than 70% of respondents scored their interest as 8 or higher on a scale from 1 to 10.

Survey respondents also reported skepticism as to whether local markets would be viable and profitable given the perceived “oversupply” of nursery products in the region and the intensity of competition from so-called “big box retailers.” Determining whether consumers are willing to pay a premium for locally-grown nursery products would be important to the success of such an initiative. As with all other types of farm products there are particular infrastructure and distribution systems for nursery products. Understanding those systems is an important first step in any effort to expand local sales of nursery products.

²⁴ *The Value of Appalachian Grown*[™] *Labeling for Nursery Growers in WNC*. 2006. Appalachian Sustainable Agriculture Project: Asheville, NC. (Appendix A)

SECTION 2: Demand for Local Food in Western North Carolina

Demand for food is often described in terms of spending. The region's one million residents spent an estimated \$2.2 billion on food in 2004, according to the Bureau of Labor Statistics' annual Consumer Expenditure Survey.²⁵ According to the survey, the average household spent \$3,119 on groceries and \$2,199 on food consumed in other places that year. For WNC, where 1,060,061 residents equals an estimated 424,024 households,²⁶ that means roughly \$1.3 billion was spent on food consumed at home and about \$932 million was spent on food consumed away from home. Just over three quarters of all away-from-home food spending typically occurs in restaurants.²⁷

There are also millions of visitors each year that purchase food from WNC businesses. The Blue Ridge National Heritage Area (BRNHA), which includes the 23 counties of Advantage West plus two additional counties, estimated tourism spending at restaurants of \$418.4 million in 2004 based on a total of 21.5 million visits to the region that year.²⁸ In a separate study examining tourism spending in the state, the private research firm Global Insight calculated tourism expenditures on food and drink in the region to be around \$363.9 million. Adding tourist food spending to resident food spending generates total estimated food spending in the region of approximately \$2.6 billion.

Demand for local food and farm products will be a subset of that, though actual consumer spending on local food and farm products is difficult to calculate. The USDA collects limited data on sales from farmers to consumers and no data at all regarding sales from farmers to businesses, organizations, or institutions in a particular geographic area. Besides data collection problems there are barriers that prevent consumers, organizations, and businesses in the region from purchasing as many locally-grown foods as they want (see Section 4).

Another complicating factor is that demand for local food is still growing and is likely to go on growing. According to the market research firm the Hartman Group, "local" is one of the food attributes most highly valued by consumers nationwide and a major trend affecting the food industry.²⁹ JWT, the largest advertising agency in the U.S. and fourth in the world, recently identified local food as one of the top ten trends for 2007 and predicted that consumer demand will shift from organics to locally sourced food.³⁰ Other sources

²⁵ 2004 Consumer Expenditure Survey. Bureau of Labor Statistics.

²⁶ Population estimate for 2004 from Table 1: *Annual Estimates of the Population for Counties of North Carolina*: Population Division, US Census Bureau.

²⁷ Table 3: *Food away from home*. Food, CPI, Prices and Expenditures Briefing Room. Economic Research Service, USDA.

²⁸ Evans, M., Davé, D., Stoddard, J., Ha, I.S. *Measurement of the Economic Vitality of the Blue Ridge National Heritage Area*: 2006. Blue Ridge National Heritage Area (BRNHA), North Carolina.

²⁹ *What Makes Local Special?* 2007. The Hartman Group, Inc: Bellevue, WA.

³⁰ *Ten Trends That Will Shape Our World in 2007*. 2006. PR Newswire, United Business Media: <http://sev.prnewswire.com/advertising/20061207/NYTH08407122006-1.html>

emphasize the growing importance of “local” for supermarkets as they try to demonstrate their connections to local farms and satisfy consumer concerns about food origins.³¹

In describing demand for local food in this section of the report, three different levels of spending are introduced:

- **Current spending** includes actual spending on local food reported by consumers and organizations in the region. Where actual spending is not available, estimates are calculated based on available information.
- **Desired spending** equals estimated spending by consumers and organizations that have high interest in local food but are not buying as much as they want, generally because they are not able to get it. It represents the amount of spending that could occur if there were improvements in infrastructure and distribution making it easier for buyers interested in local food to get it.
- **Maximum spending** reflects both improvements in infrastructure and distribution systems for local food plus changes in tastes and preferences such that more individuals and businesses desire to buy locally-grown food. As a maximum figure, this level of spending represents the highest possible level of spending for each market examined by assuming that all individuals, businesses or organizations in the category have high interest in local food.

Dollar values for these levels of spending are generated in different ways throughout this section. The calculations are based on survey data as well as published statistics and are included as formulas in many places for clarity. An overview of all surveys and data collection methods used for the project is provided in Appendix A, along with individual reports providing greater detail than is included in this section.

After **Chapter 1**, which reviews regional consumer preference research regarding locally-grown foods, Section 2 is laid out in terms of markets. **Chapter 2** examines direct markets, including farmers’ tailgate markets, Community Supported Agriculture, on-farm retail operations, and roadside stands. These involve sales of food and farm products directly from farmers to consumers. **Chapter 3** explores larger scale markets like food stores, restaurants, and organizations. In this chapter the focus shifts from consumer spending on locally-grown food to spending by restaurants, retailers and institutions. As the local food system grows larger, these are the places where demand for local food is most relevant for the region’s farmers in terms of quantity. **Chapter 4** summarizes demand for local food in both direct and larger scale markets.

Two additional notes are important regarding the assessment of demand for locally-grown food in this section. The first involves a focus on fresh fruits and vegetables. While the long-term projection includes bringing locally-grown meat, dairy and other processed farm products into local markets, the reality is that in the current food system little infrastructure

³¹ *Supermarket Trends: Buzz Words Include “Service,” “Local,” and “Ethnic.”* January 17, 2007. The Seattle Times, seattletimes.com

exists for processing and distributing many of those products for local sale. Moreover, much of the research on local food (here and in other places) is limited to exploring consumer and organizational interest in buying locally-grown produce. Produce is the category of food that includes fresh fruits and vegetables. Subsequent sections of the report will explore possibilities for expanding local markets for other food and farm products.

A second note is the fact that this section does not take into account the current supply of fruits and vegetables produced in the region. Adjustments are made for seasonality but not for current levels of production for any particular food. Section 3 covers these issues of capacity by examining production levels and supply constraints for the major types of food produced in the region.

Chapter 1: Consumer Preferences

A survey commissioned to measure consumer perceptions of locally-grown food demonstrates that consumers in the region support local farms and the businesses that sell local farm products.³² The survey, which consisted of phone interviews to 300 randomly selected consumers in Buncombe, Madison and Henderson Counties, concluded that residents prefer local food because they believe it is healthier and tastes better, that purchasing locally-grown food contributes to the local economy and protects the environment, and that it helps to preserve the rural character of the region. Three quarters of survey respondents indicated that when locally produced foods cost a little more, they are worth the extra cost.

The survey also concluded that demand for local food has increased in the region. Asheville area residents reported spending a greater percentage of their monthly budget on locally-grown food in 2004 than in 2000. In 2004, 27% of residents surveyed reported spending more than 10% of their monthly expenditures on locally-grown food, whereas only 20% reported spending that much in 2000. Most importantly, the study concluded that 82% of respondents indicated they would buy more locally produced food if it were labeled as local.

Research on consumer perceptions of local food in other regions echoes these findings. Several studies concluded that the term “locally-grown” has a significant influence on food purchasing decisions.^{33,34,35} One study reported that 56% of respondents were willing to pay more for produce from local businesses. The other two studies concluded that for 75% of consumer respondents and 55% of food business respondents, locally-grown food by family farmers was their first choice – even above certified organic choices – when shopping for produce and meat products. Key characteristics associated with locally-grown food in that research include freshness, taste, and quality. The studies also concluded, as the WNC

³² *Locally Grown Food Strategic Positioning Research*. 2004. Research Inc: Atlanta, GA. (Appendix A)

³³ DeCarlo, T.E., Franck, V.J., Pirog, R. *Consumer Perceptions of Place-Based Foods, Food Chain Profit Distribution, and Family Farms*. 2005. Leopold Center for Sustainable Agriculture. Ames, IA.

³⁴ Pirog, R. *Ecolabel Value Assessment: Consumer and Food Business Perceptions of Local Foods*. 2003. Leopold Center for Sustainable Agriculture. Ames, IA

³⁵ Pirog, R. *Ecolabel Value Assessment Phase II: Consumer Perceptions of Local Foods*. 2004. Leopold Center for Sustainable Agriculture. Ames, IA.

research did, that consumers place a high value on the perception that purchasing local foods supports local farmers and the local economy, promotes good health, and protects the environment.

Two of the studies also illustrate the value of labeling local products.^{36, 37} A majority of respondents in those studies indicated that informational labels are important to their decision making processes. The researchers concluded that when shopping for food consumers find locally-grown labels appealing; local labels convey product values of freshness, quality, and taste; and labels appeal to consumers' desire to support local farms and local communities. A separate pilot study in California and Oregon observed dramatic increases in local tomato sales when retailers and distributors identified the tomatoes with colorful local labels.³⁸

Taken together, the WNC-based research and the other studies cited demonstrate high desire for locally-grown food and suggest the willingness of consumers to pay more for local food. Just as clearly they demonstrate the value of product identification or labeling. Labeling is particularly important in larger scale markets in ensuring that producers receive the full value of any premium associated with locally-grown food.

Chapter 2: Direct Markets

Traditional market channels included in the USDA-defined category of Direct Sales include farmers' markets, Community Supported Agriculture (CSA), roadside stands, and other on-farm sales. The USDA distinguishes these as *sales of farm products for human consumption*, which means that nursery crops and Christmas trees are not counted as Direct Sales. A 20% increase in this type of agricultural receipt in the region between 1997 and 2002 indicates considerable growth in this area, though the absolute amount of Direct Sales remains relatively small. The total \$3.1 million in Direct Sales accounted for only 0.6% of all agricultural sales in the region in 2002. In all likelihood this value is low due to problems with USDA data collection methods. USDA data on direct marketing of farm products is widely believed to be both inaccurate and incomplete.³⁹

Table 4 provides some indication of growth in Direct Sales in the region by looking at the number of farms, tailgate markets, and CSA programs listed in ASAP's *Local Food Guide* each year. Farms are listed in the guide based on their interest in selling direct to consumers. Data describing farm sales through each market channel follows.

	2002	2003	2004	2005	2006	2007	Increase 2002-2007
Farmers' tailgate markets	32	33	34	33	34	34	+ 6%
CSA farms	12	14	17	21	20	22	+ 83%
Family farms	58	127	144	167	182	205	+253%

³⁶ Pirog, R. 2003.

³⁷ Pirog, R. 2004.

³⁸ *Ecotrust Annual Report*. 2003. Ecotrust: Portland, OR.

³⁹ *Direct Marketing Today: Challenges and Opportunities*. 2000. Agricultural Marketing Service, USDA.

Farmers' Tailgate Markets

As a means of food distribution, farmers' markets provide important urban-rural linkages. Over the past two decades the number of farmers' markets in the U.S. has grown alongside increasing consumer interest in finding fresh products from the farm. Over the past decade the number of farmers' markets nationwide increased almost 20%, from 1,755 in 1994 to 4,385 in 2006.⁴⁰ Based on the number of listings in the *Local Food Guide*, there are a total of 34 farmers' tailgate markets in WNC.

Information about sales of locally-grown food through farmers' tailgate markets in the region is available from two sources. The first is a set of surveys conducted at six markets in Buncombe and Madison counties during the summers of 2003 and 2004.⁴¹ A total of 694 customer interviews and another 732 rapid-response "dot surveys" were collected by ASAP staff and the Mountain Tailgate Market Association (MTMA), with analysis by the Center for Assessment and Research Alliances at Mars Hill College.

The market surveys indicate that farmers' tailgate markets are supported by a loyal base of repeat customers and are growing in customer support. Based on customer counts, more than 2,000 customers shopped at the markets on any given week during the study period. Of that number, 46% shopped at the markets every week and another 20% shopped at the markets every two weeks. The number of first-time shoppers at the Asheville city markets increased from 15% to 20% of total shoppers from 2003 to 2004.

Spending at farmers' tailgate markets is also increasing. Per capita expenditures at the markets grew from \$13.41 in 2003 to \$15.01 in 2004, a 12% annual increase. More importantly, the percentage of weekly shoppers spending more than \$20 at the markets increased from 24% in 2003 to 36% in 2004. Using the written surveys for all markets across both years, the estimated per capita customer expenditure is \$14.18.⁴² Combining customer survey responses about expenditures at the four markets in the Asheville city limits with customer counts taken at those markets, a weekly sales total of \$24,120 was calculated.⁴³ Using this figure as a weekly average, total sales at the four markets for the months of June, July and, August were estimated at over \$300,000, or \$75,000 per market.

⁴⁰ *Farmers Markets*. Agricultural Marketing Service, USDA.

⁴¹ *A Market Analysis of Farmers' Tailgate Markets in Buncombe and Madison Counties*. 2005. Center for Assessment and Research Alliances, Mars Hill College. Mars Hill, NC. (Appendix A)

⁴² This figure was arrived at by multiplying the number of respondents in seven different self-reported spending categories by the midpoint value of the category for 664 shoppers at the markets in 2003 and 2004, then totaling the results and dividing by 664 to obtain an average per capita spending amount. (See p. 70A in Appendix A)

⁴³ See page 73A in Appendix A.

Recognizing that there are at least 30 other farmers' tailgate markets in the region, sales at all markets together may be as high as \$2.6 million dollars (34 markets X average of \$75,000 per market = \$2.6 million). In all likelihood, though, sales at markets in more rural areas are much lower than sales at the Asheville city markets. A more conservative estimate of \$1.4 million would reflect sales at markets outside of Asheville as half as high as the city markets ([\$75,000 X 4 markets in Asheville city limits] plus [\$37,500 X 30 remaining markets] = \$1.4 million).

Shoppers at the four Asheville-area markets were asked about additional shopping they planned to do related to their trip to the market. Economic activity generated by shoppers who indicated that the markets brought them to town that day *and* that they would do additional shopping while they were in town was estimated at \$191,620 for the summer months.⁴⁴ Combining that number with the \$300,000 in direct spending at markets results in a total economic impact figure close to \$500,000 per year for the four markets in the study group.

The tailgate market surveys also confirmed that the popularity of the markets is about more than just food. When asked what they liked most about the markets, customers overwhelmingly indicated that they enjoy the markets as community social events and they appreciate the opportunity to support local farmers.

The second source of information about sales of local farm products through farmers' tailgate markets in WNC is a 2003 survey of 61 vendors from eight tailgate markets in Buncombe and Madison counties.⁴⁵ Vendors described tailgate markets as an effective way to market local farm products, with each of the eight markets described as the "most profitable market" by at least one group of vendors. Estimates provided by the vendors of total season sales at the top four markets where they sell generated a seasonal total of \$390,946 in direct sales for the 61 vendors surveyed.

Freeman's Farm: Growing Trust in the Fields

Calvin Freeman has been growing for market in Rutherford County since he was a teenager. At that time, he and his twin brother would work in the fields with their father and take produce to the market in Asheville once a week. Calvin now sells at the Marion Flea Market and at the Rutherford County Tailgate Market, where his customers return week after week and season after season. They even drop by his farm or call him on the phone to see what he has available to sell. Calvin has found over the years that what keeps his customers coming back to the market are his consistent quality produce and his personal response to buyers' requests. "I always try to grow what people want," says Calvin. "My number one priority is high quality. And of course, to keep my produce looking good. Because if it's pretty," he laughs, "it'll sell."



Read the full case study, page 8B

⁴⁴ See page 75A in Appendix A.

⁴⁵ *Results from a Survey of Tailgate Market Vendors*. 2006. Appalachian Sustainable Agriculture Project. Asheville, NC. (Appendix A)

Potential for Expanded Tailgate Market Sales

The potential for expanded sales through farmers' tailgate markets lies in increasing the number and location of markets in addition to continuing the market promotional activities that have been so effective. Mostly, that means adding markets in locations where they are not currently operating, particularly further from the hub of markets and local food activity in the Asheville area. Convenience is important based on the tailgate market survey finding that the majority of shoppers lived within five miles of the markets studied. Expanding tailgate market sales also means offering training, workshops and other resource materials for farmers interested in selling at the markets.

In terms of infrastructure, farmers' markets require a permanent and convenient location with adequate space for vendor stalls, parking for shoppers, and in some cases restroom facilities. For uncovered markets like most in this region, vendors also need tents, tarps, or some other kind of shelter to protect products and delineate their stalls. They need tables or shelving to display their products and adequate refrigeration and storage units for products like meat, eggs, and cheese. Market planning must occur in cooperation with local businesses and city or county governments.

Increasing market opportunities for farmers' markets may also encompass expanding their reach into low-income market segments. Current USDA programs like the Women, Infants, and Children (WIC) Farmers Market Nutrition Program and the Senior Farmers Market Nutrition Program enable program beneficiaries to shop at farmers' markets for fresh foods. Nationwide the USDA reports that almost 60% of markets participate in farmers market nutrition programs.⁴⁶ In Western North Carolina, farmers' markets in eight counties participate in the WIC program and markets in four counties participate in the Senior Farmers Market Program.

Community Supported Agriculture

Community Supported Agriculture (CSA) is a growing form of direct marketing by farmers. CSA is an arrangement whereby consumers pledge to purchase a share of the produce each week from a particular farmer at a price that is established at the start of the growing season. The farmer gains the security of having a guaranteed market for their produce and revenue at the start of the growing season. The consumer receives a variety of fresh, locally-grown produce all season long as well as the opportunity to know where their food comes from and how it is produced. A census of CSA programs taken by the USDA Alternative Farming Systems Information Center (AFSIC) in 1999 reported no such programs in North Carolina. Today there are 28 North Carolina-based CSA farms listed by AFSIC and 20 CSA farms listed in ASAP's *Local Food Guide*.

In the fall of 2004, twelve CSA farms completed an email survey in which they were asked to provide details about their CSA programs.⁴⁷ Programs in WNC vary widely in size, with

⁴⁶ USDA AMS. Farmers Markets. <http://www.ams.usda.gov/farmersmarkets/FMstudystats.htm>

⁴⁷ *Community Supported Agriculture in the French Broad River Basin*. 2005. Appalachian Sustainable Agriculture Project. Asheville, NC. (Appendix A)

the smallest selling just 4 shares in 2004 and the largest selling 52 shares that year. In terms of acreage, the largest CSA farm reported 7 acres in production, and the smallest had only a 5,000 square foot greenhouse. For all of the farms surveyed, the CSA program represented only a portion of their total farm business, some as little as 10% and others as much as 90%.

How important are organic food sales in local markets?

Congress passed the Organic Foods Production Act of 1990 to establish national standards for organically produced commodities. The legislation was implemented by the USDA in 2002. The standards address the methods, practices, and substances used in producing and handling crops, livestock and processed agricultural products.

Organic has been one of the fastest growing segments of food production in the U.S. for over a decade. In 1990, there were under a million acres of organic farmland in the U.S. By 2005 all 50 states reported some certified organic farmland. In total, U.S. producers dedicated over 4.0 million acres of farmland – 2.3 million acres of cropland and 1.7 million acres of rangeland and pasture – to organic production systems in 2005.⁴⁸

A 2002 survey of farmers' market managers in more than 20 states confirmed that organic food sales are prominent in local food outlets like farmers' markets because customers at those markets tend to value having direct access to farmers that use ecologically sensitive agricultural techniques.⁴⁹ That study found modest price premiums associated with organic foods, though other research has shown considerably higher premiums for organically produced farm products (as high as 262% for organic broilers, for example).⁵⁰ The 2003 survey of tailgate market vendors in WNC concluded that only 12% of vendors surveyed were certified organic, but four times that many reported using organic practices. According to some vendors – who cited extra cost and time required for certification as barriers to becoming certified organic – customers were more concerned with production practices than the organic label.

Organic certification may be more important in larger scale markets, particularly retail food stores. It is likely that the production of certified organic crops will increase in the region if local markets demand the use of organic practices and labeling. In WNC, 101 farms reported selling approximately \$425,000 of certified organic products in 2002, eight percent of the state's total that year. Primary organic-producing counties were Ashe, Buncombe, Madison, Rutherford, and Wilkes.

If organic food sales in WNC average 2.5% of total retail food sales – the same as the national ratio of organic food sales to total food sales in 2005 – then the market for organic food in WNC is \$32.5 million. That includes all types of organic foods, not just farm products. The fruit and vegetable portion of that total may be as high as \$10 to \$15 million, based on the fact that fruits and vegetables account for a larger share of organic food sales than any other type of food.⁵¹ Seasonality constraints will limit the extent to which regional producers can meet that demand. Using a “seasonality adjustment” described on page 38 of this report, the potential for locally-grown organic fruits and vegetables in the region may range from \$2.6 million to \$3.9 million.

⁴⁸ *Organic Farming and Marketing Briefing Room*. Economic Research Service, USDA.

⁴⁹ *Organic Produce, Price Premiums and Eco-labeling in U.S. Farmers Markets*. 2003. Economic Research Service, USDA.

⁵⁰ *Organic Poultry and Eggs Capture High Price Premiums and Growing Share of Specialty Markets*. Economic Research Service, USDA.

⁵¹ Dimitri, C. and C. Greene. *Recent Growth Patterns in the U.S. Organic Foods Market*. 2002. Economic Research Service, USDA.

In looking at the dollar potential of CSA programs as a market channel for selling local farm products, the 1999 National CSA Farm Survey is instructive. From those data, a median figure of \$15,000 was determined to be the best measure of CSA gross income, excluding the influence of particularly large and extremely small programs⁵². For the 20 CSA farms in the region, that translates into a rough estimate of \$300,000 in cash receipts from farming occurring through Community Supported Agriculture each year. This is a very imprecise way to measure CSA income in WNC and an area where more research is needed to accurately measure the contribution of this type of farming to the region's agricultural economy.

Growth in this market channel can occur by increasing sales through existing CSAs or increasing the number of CSA farms operating in the region. As with expanding tailgate market sales there are infrastructural obstacles to expanding CSA sales beyond their current level. For example, there is poor public awareness about CSA programs, there are additional requirements for producers such as the need to communicate with members and manage record-keeping requirements, and additional time is required for sorting, packing, and distributing shares. Of the CSA programs surveyed, farmers were mixed in their interest in expanding. Many were, however, interested in collaborating or sharing resources with other CSA programs.

In terms of demand, indications are that there is good potential for growth given consumer satisfaction with the model. Nearly all of the CSA programs surveyed collect feedback from members in some way and most report this to be positive. Members are reportedly satisfied with both the farm products they receive and the opportunity to communicate directly with farmers. CSA programs also provide social and educational opportunities for members.

Roadside Stands and Other On-farm Direct Markets

The North Carolina Department of Agriculture and Consumer Services (NCDA&CS) maintains a database of Certified Roadside Farm Markets in the state. The database currently lists 27 roadside markets in WNC that sell produce grown by the operator and other local farmers. Many other farmers sell direct to consumers through on-farm retail. Of 303 apple farms in the region in 2002, 75 have listings for on-farm retail operations on the NCDA&CS website and 68 are listed in ASAP's *Local Food Guide*. Of 1,352 Christmas tree growers in WNC in 2002, approximately 340 are estimated to market their products direct to consumers through choose-and-cut operations.⁵³

These outlets – like other direct market channels – provide opportunities for farmers to capture 100% of the retail value of sales, but there can be significant costs associated with staffing the retail operation. No data is available detailing the dollar value of sales through these outlets.

⁵² Lass, D.G., Hendrickson, J. & Ruhf J. *CSA Across the Nation: Findings from the 1999 CSA Survey*. 2003. Center for Integrated Agricultural Systems, Madison WI.

⁵³ According to the NC Christmas Tree Association, 25% of Christmas tree growers in NC have choose-and-cut operations.

Chapter 3: Larger Scale Markets

Researchers describe a process called “scaling up,” which refers to efforts to increase local food sales by reaching larger markets than are available through traditional Direct Sales categories.⁵⁴ There is a practical limit to how much food can be sold through direct markets and the largest share of most consumers’ food spending will continue to be in grocery stores and supermarkets. Larger scale markets include retailers, restaurants, other businesses, and institutions that serve or sell food.

What is the farm value of food?⁵⁵

The farm value is a measure of the return farmers receive for the food they sell. According to the USDA Economic Research Service – which tracks the farm-to-retail price spreads of many different foods – the farm value of food sales varies greatly for different types of foods. Generally speaking, the farm value share of the food dollar decreases as the degree of processing increases and as the distance (measured in number of transactions) between farmer and end user increases. With increased consumer demand for convenience foods, food manufacturing – which adds economic value to agricultural products through processing and packaging – has significantly increased in importance. With the increasing role of food manufacturing, farmers receive smaller proportions of what consumers pay for food products at the retail level.

Across all food categories, the farm value share of the food dollar was most recently estimated at around 20%. For fresh fruits and vegetables, the farm value share was calculated in 2004 as 23.5% and 26.6% for fresh fruits and vegetables, respectively. In other words, the farmer earned 23.5 cents for every dollar of fresh fruits sold in retail outlets that year and 26.6 cents for every dollar of fresh vegetables sold. The rest went to retailers and intermediaries, such as wholesalers, packers, processors and distributors. This is in contrast to Direct Sales, where farmers earn 100% of the sales price (although with Direct Sales there are other hidden costs associated with transporting, packing and marketing farm products).

The farm-to-retail price spread is the difference between the farm value and the retail price for food. It is not the same as a profit margin, which is the difference between what a company or business pays for an item and what it sells the same item for. The farm-to-retail price spread includes profit margins, but it also accounts for payments associated with assembling, packing, processing, and distributing farm products after they leave the farm. In other words, it includes both costs and profits of retailers. Likewise the farm-to-wholesale price spread involves the costs and profits of wholesalers.

In this chapter there is a shift in focus from spending at the consumer level to spending at the organizational level. That involves accounting for differences in the price of food at different points in the transaction chain from farm to table. The \$2.6 billion worth of food purchased by residents and visiting tourists, for example, will at an earlier point be purchased for considerably less money by businesses and organizations. What consumers pay for food is

⁵⁴ Unger, S. & Wooten, H. *A Food Systems Assessment for Oakland, CA: Toward a Sustainable Food Plan*. 2006. Oakland Mayor’s Office of Sustainability and University of California, Berkeley, Department of City and Regional Planning.

⁵⁵ *How low has the farm share of retail prices really fallen?* August 2006. Economic Research Service, USDA.

the *retail value* and what businesses pay for the same food is the *wholesale value*. There is a third value, the *farm value*, which reflects the amount that farmers receive for the food they sell (see box, next page). Farm value is sometimes referred to as a percentage of the retail price of food. These different values complicate the analysis but are important to understanding the potential impact of local markets on the region's food and farm economy.

Throughout this chapter figures describing current, desired, and maximum spending on local food are wholesale values. In other words, the reported figures represent amounts retailers, restaurants, businesses, and institutions might spend on food, not what consumers would spend. Before making comparisons with direct market channels or comparing reported figures against the total \$2.6 billion in consumer food spending in the region, it is necessary to convert the wholesale values to retail values.

In this chapter and throughout the report a simple formula in which the wholesale value equals half of the retail value of food is used to make these conversions. In other words, the amount a business pays for food is calculated to equal half of what it sells the food for. The difference – which can be referred to as the wholesale-to-retail price spread – includes retailer profit as well as costs of doing business. In reality, wholesale-to-retail price spreads vary both by type of food and type of market channel and fluctuate over time.⁵⁶

Table 5 provides an overall picture of current and potential spending on local produce by large-scale buyers in the region. Figures in the table are based on surveys and other research, which is detailed in the remainder of the chapter.

	Current Spending	Desired Spending	Maximum Spending
Full service groceries	\$5.1 million	\$13.5 million	\$17.0 million
Specialty food stores	\$100,000	\$234,000	\$936,000
Full-service restaurants	\$117,000	\$760,500	\$3.0 million
Summer Camps	\$27,500	\$51,840	\$172,800
Public Schools	\$19,000	\$139,230	\$198,900
Colleges/Universities	\$18,450	\$169,000	\$234,000
Hospitals	\$25,600	\$289,536	\$332,800
Total (wholesale spending)	\$5,407,550	\$15,144,106	\$21,874,500
Total (retail equivalent)	\$10,815,100	\$30,288,212	\$43,749,000

Source: Various surveys and other research described throughout this section

- Column 1 is actual local food spending through each market channel based on a combination of reported and estimated figures.

⁵⁶ This simple formula was developed after reviewing limited price spread data available from the USDA and informal data on food purchases and food sales provided to ASAP by its Campaign Partners.

- Column 2 is the maximum amount of produce organizations that are already buying local food in each category could buy, plus similar spending by organizations that have high interest in local food. It is the amount interested organizations could buy if there were improvements to infrastructure and distribution systems for local produce.
- Column 3 is essentially the highest level of spending for each type of business. These figures assume improvements to infrastructure and distribution systems for local produce in addition to changes in tastes and preferences so that all businesses in each category have high interest in local food. Thus the figures represent upper limits for spending on local produce by each type of large-scale buyer in the table.

There are some business categories not accounted for in Table 5 – hotels, convenience stores, fast food restaurants, and recreational facilities that sell food, for example. Those particular types of businesses were presumed to have low potential for buying local food and are not included in calculations. Including those groups would result in higher (though likely not as realistic) estimates of the potential for local produce purchases by large scale buyers in the region.

RETAIL GROCERIES

The best source for estimating sales through retail food stores at the county level in WNC is the 2 percent food local sales and use tax database.⁵⁷ Those data indicate total retail food store sales in WNC of approximately \$1.3 billion in 2005. That includes food sales through all types of outlets, from convenience stores to specialty food stores to large supermarkets and supercenters. It corresponds to the \$1.3 billion in regional at-home food consumption estimated from the Bureau of Labor Statistics' Consumer Expenditure Survey. Using ratios provided by the Produce Marketing Association regarding the proportion of produce sales through each category of outlet, the following breakdown of produce sales through food stores in the region is available.

Category of Store	Estimated 2005 Produce Sales	% of Total
Full Service Grocers	\$130,768,540	91%
Specialty food stores and "other" including health food stores, food co-ops, etc.	\$7,185,085	5%
Warehouse clubs	\$4,311,050	3%
Convenience stores	\$1,437,017	1%
Total	\$143,701,693	100%

Sources: NC Department of Revenue; Produce Marketing Association.

Using the wholesale-to-retail conversion formula described on page 34, these produce sales can be used to estimate produce spending by retail food stores in the region (Table 7).

⁵⁷ *County Tax Revenue Tables, Table 55.* North Carolina Department of Revenue.

Table 7: Estimated Produce Spending by Retail Food Stores in Western North Carolina		
Category of Store	Estimated 2005 Produce Purchases	% of Total
Full Service Grocers	\$65,384,270	91%
Specialty food stores and "other" including health food stores, food co-ops, etc.	\$3,592,542	5%
Warehouse clubs	\$2,155,525	3%
Convenience stores	\$718,508	1%
Total	\$71,850,846	100%

Convenience stores and warehouse clubs are assumed to have lower potential as market channels for locally-grown food and are not included in the potential demand calculations in this report. Market potential is thought to vary significantly between the remaining two categories – full-service groceries and specialty food stores.

Full-Service Groceries

Full-service groceries represent a potentially large market for WNC growers, though the ability of regional growers to satisfy this demand will depend on their ability to meet the terms of the retailers regarding packaging and delivery of farm products. Information about the retail grocery market comes from interviews, observations of regional retailers' marketing practices, and national market research.

A series of in-depth interviews were conducted with representatives from Ingles Markets, Earthfare, and Greenlife Grocery – the three full-service groceries participating in ASAP's Local Food Campaign. Together, those companies operate approximately 64 individual stores in the region. According to these interviews, one of the most important issues influencing the ability of regional farmers to sell to full-service groceries concerns food safety. This includes increasingly complex government requirements for certifying the safety of food as well as the need for producers to carry liability insurance. Other important issues for grocers relate to the seasonality of production in the region and the need for grocers to maintain relationships with year-round suppliers.

According to the interviews current combined produce purchases by Ingles, Earthfare, and Greenlife are around \$34 million per year, almost half of the total estimated \$71.9 million in retail food store produce purchases for the entire region (Table 7). On average, company representatives estimated that roughly 10 percent to 20 percent of total annual produce purchases involve locally-grown produce. This estimate may be high since retailers often assume that all produce provided by local or regional distributors and wholesalers is locally-grown. In reality, such companies often source food from other regions to supplement the local products they offer in order to maintain a consistent, year-round supply.

While the details of local food purchasing by other grocery retailers in the region are not available, this report assumes high interest among 80 percent of the region's full service

grocery retailers including grocery supercenters. This assumption is grounded in both the national market research identifying local as a top trend that will affect the food industry in the coming years and in the prevalence of local food promotions by the regions' other full service grocery chains. Excluded from this percentage are the region's convenience stores, warehouse clubs, and discount groceries, which are assumed to have lower potential as market channels for locally-grown food.

Figure 5: INGLES-KING KULLEN CASE STUDY COMPARISON

With the largest of the three full-service groceries joining ASAP's Local Food Campaign in 2006, a useful model for examining potential is a case study style of comparison between Ingles and the King Kullen chain of grocery stores in New York.

- ❖ Ingles Markets is a leading supermarket chain operating close to 200 stores in six states, approximately 60 of them in WNC.⁵⁸
- ❖ King Kullen is a regional supermarket chain operating 40 plus stores in Long Island and Staten Island in New York.⁵⁹
- ❖ Five years ago King Kullen Grocery made a commitment to purchase more locally-grown food. For King Kullen, the decision to buy locally-grown produce made good business sense. During the growing season, the chain has a consistent source of quality produce and King Kullen customers are guaranteed fresh, locally-grown vegetables. A highly recognizable logo identifies local farm products in King Kullen stores and demonstrates King Kullen's support of the local community and local farmers. Because the store understands that local produce attracts consumers to their stores, King Kullen pays farmers at the higher end of the market price.⁶⁰
- ❖ During the first year, King Kullen spent roughly \$100,000 on produce from Long Island farmers. In 2006, King Kullen is expected to spend between five and six million dollars, more than a 50 times increase.⁶¹
- ❖ In Western North Carolina, Ingles' commitment to purchase more locally-grown produce creates unprecedented opportunities and has the potential to significantly increase revenues for the region's farmers.

If Ingles Markets is able to incorporate locally-grown food to the same extent that the similar-sized regional grocery chain King Kullen has, local food purchases by that company alone could reach \$5 to \$6 million by the year 2011.

There is an upper limit to the amount of produce retail food stores can buy from regional growers based on climate- and soil-related limitations. WNC farmers could not supply 100% of produce to local retailers because they cannot grow oranges, lemons, or bananas, for example, no matter how much local food infrastructure is improved. They can, however, grow each of 38 different types of fruits and vegetables that accounted for 80% of produce sales in retail outlets nationwide in 2005. In Table 8 (next page) those 38 items are listed along with their corresponding share or percentage of total retail produce sales.

⁵⁸ *All About Ingles: A Company Profile*. 2004. Ingles Markets. Asheville, NC.

⁵⁹ Halweil, B. *Local Produce Fit for a king*. 2004. The East Hampton Star Online.

⁶⁰ Reich-Hale, D. *King Kullen Trumpets Local Farm Connection*. 2004. Long Island Business News.

⁶¹ Joe Gergela, executive director, Long Island Farm Bureau, personal communication 2006.

Based on the table, an adjustment for seasonality would be to say that WNC farmers could grow 80 percent of retail produce items for a third of the year, or 26 percent of the total (80% X 33% = 26%). In other words, farmers can grow all of the items listed in Table 8, but some only in the four months of the summer season and others only in the winter season. Some items, like apples, can be supplied to local markets for more than four months and others for less. Without being able to calculate exactly how many months each item would be available to local markets, the 26 percent ratio is intended to provide a reasonable adjustment for the seasonality of production in the region.

Table 8: \$ Share of Retail Produce Sales for Selected Fruits and Vegetables					
Vegetables	% of Total Produce Sales in 2005	Vegetables (Continued)	% of Total Produce Sales in 2005	Fruits	% of Total Produce Sales in 2005
Asparagus	1.3	Mushrooms	2.3	Apples	7.7
Beans	1.1	Onions	4.2	Berries	6.3
Broccoli	1.9	Parsnip	0.1	Cherries	1.6
Beets	0.1	Peas	0.3	Grapes	7.3
Cabbage	0.7	Peppers	3.2	Nectarines	1
Carrots	3.2	Potatoes	5.8	Melons	5.3
Cauliflower	0.7	Pumpkins	0.2	Peaches	1.5
Celery	1.6	Radishes	0.4	Pears	1.2
Corn	1.2	Roots	0.1	Plums	0.8
Cucumbers	1.8	Spinach	0.7		
Eggplant	0.2	Sprouts	0.2		
Garlic	0.4	Squash	1.5		
Greens	0.3	Sweet potatoes	0.8		
Leeks	0.1	Tomatoes	8.5		
Lettuce	4.1				
Column Totals	18.7		28.3		32.7
Total share of produce accounted for by fruits & vegetables that can be grown in WNC: 79.7%					

Source: Fresh Look Marketing, <http://www.freshlookmarketing.com> (reported by Produce Marketing Association)

Demand for local produce through the full-service grocery market channel:

- **Current spending** is calculated as \$5.1 million. This represents 15% of total estimated produce purchases for 60 Ingles stores, three Earthfares and one Greenlife Grocery. While there are certainly other retail groceries in the region buying locally-grown produce, they are not included in this estimate because no details about those purchases are currently available. (15% X \$34 million = \$5.1 million)
- **Desired spending** for local produce is calculated as \$13.5 million. This figure represents 26% of total produce purchases for 80% of full service grocery stores in the region; it is the assumed maximum amount these stores could buy given improvements in local food distribution and infrastructure but recognizing limitations associated with climate and growing conditions. (80% X 26% X \$65.4 million = \$13.5 million)

- **Maximum spending** is calculated as \$17 million, which is 26% of produce purchases for all full-service groceries in the region. This assumes improvements in infrastructure plus increased interest in local food by the region's retailers to the highest possible level. (26% X \$65.4 million [Table 7] = \$17 million)

Specialty Food Stores

Specialty food stores hold good potential for increasing local produce sales because they are generally independently owned and operated and typically feature produce to a greater extent than full-service groceries. According to the Produce Marketing Association, produce accounts for 70% of sales through specialty food stores compared to just to 16% for supermarkets and supercenters.

It is difficult to say with certainty how many of this category of store there are in the region. If the ratio of specialty food stores to total retail food stores is the same as it is statewide, there may be around 70 specialty food stores in the region.⁶² That includes food co-ops, ethnic groceries, fruit and vegetable markets, and other types of stores marketing a specialized line of food. In total, the region's specialty food stores purchase an estimated \$3.6 million of produce each year (Table 7, page 38).

Demand for local produce through the specialty food store market channel:

- **Current spending** is \$100,000. This is not a calculation but is based on current purchasing reported by specialty food stores belonging to ASAP's Campaign.⁶³
- **Desired spending** for local food among specialty food stores is estimated as \$234,000. This represents 26% of specialty food store produce purchases for a quarter of all specialty food stores in the region. The 26% represents the seasonality adjustment explained on page 38, and 25% is an assumed interest level for this category of store (25% X 26% X \$3.6 million = \$234,000).
- **Maximum spending** is calculated as \$936,000 and reflects 100% of specialty food stores purchasing 26% of total produce locally (26% X \$3.6 million = \$936,000).

RESTAURANTS

According to the US Economic Census, there were more than 1700 *Eating and Drinking Places* in all of WNC in 2002 with total estimated sales of \$914.5 million. The high concentration of restaurants in the region is due in part to a strong tourism industry.

In exploring the potential of restaurants as a market channel for local farmers, the following analysis is limited to full-service restaurants, those that provide food services to patrons who order and are served while seated.⁶⁴ Using this category of restaurant excludes the majority of chains and franchises in the region, though not all. Chains and franchises, compared to

⁶² *Retail Trade by Industry, NAICS Code 445*. 2002 Economic Census. US Census Bureau.

⁶³ In-house data, Appalachian Sustainable Agriculture Project.

⁶⁴ Definition for NAICS Code 722110, "Full-service restaurants."

restaurants that are independently owned and operated, are more often limited in their ability to choose where and how they obtain food.

Restaurants enrolled in ASAP's Campaign have reported steady growth in local food purchasing over time, with local produce representing anywhere from 5% to 75% of total produce purchases, depending on the season. As with food stores, seasonality and growing limitations influence the extent to which restaurants can source food from local growers. Restaurants owners and chefs, however, often have greater flexibility than retailers.

A telephone survey of full-service restaurants in the region was attempted in 2006. Time and resource constraints, combined with difficulties completing phone interviews with chefs and restaurant owners, created the need to generate estimates based on published statistics. For the 724 full-service restaurants in the region in 2002, annual sales are estimated as \$393.2 million.⁶⁵ According to the National Restaurant Association, the cost of food typically represents 33% of sales for the full-service category of restaurants, which means the amount of food purchased by those 724 restaurants would be around \$129.8 million.⁶⁶

Food spending varies considerably from restaurant to restaurant, but produce purchases represent an average of 9% of total food purchases for foodservice establishments.⁶⁷ That ratio is likely higher for full-service compared to limited-service restaurants. A conservative estimate of the amount of produce purchased by full-service restaurants in WNC, then, is \$11.7 million (9% X \$129.8 million = \$11.7 million).

Early Girl Eatery: Recipe for Success

John Stehling, co-owner of Early Girl Eatery in Asheville, explains his longstanding commitment to buying local in simple terms: "It's always been important to me to give back to my community. Working with local providers as much as I can is one way that I can do that." Although working with local farmers may be a personal choice for John and his wife Julie, it has certainly contributed to the substantial success of their restaurant, founded in 2001. The restaurant has been recognized nationwide for its fresh and healthy approach to Southern food made from scratch and for its support of local agriculture, and has remained one of the most popular restaurants in Asheville for many years. A growing local food movement in the region has made it easier for John to follow through on his instincts; his purchases of local products in all categories have increased since the restaurant's founding.



Read the full case study, page 2B

⁶⁵ 724 full-service restaurants = 43% of total restaurants in WNC (Source: Economic Census Retail Trade tables, 2002 Economic Census, US Bureau of the Census). Therefore we assume that full-service restaurant sales = 43% of total restaurant sales in WNC (43% X \$914.5 million = \$393.2 million).

⁶⁶ *Restaurant Industry Operations Report*. National Restaurant Association.

⁶⁷ Produce Marketing Association.

Demand for local produce through the restaurant market channel:

- **Current spending** is calculated as \$117,000, which represents 10% of produce purchases for 10% of full-service restaurants in the region. These are estimates and not actual reported spending (10% X 10% X \$11.7 million = \$117,000).
- **Desired spending** is calculated as \$760,500. This reflects an assumption that 25% of full-service restaurants have high interest in buying locally-grown food and includes an adjustment for the seasonality of production (p. 38). (25% X 26% X \$11.7 million = \$760,500)
- **Maximum spending** is calculated as \$3.0 million, which involves all of the region's full-service restaurants buying 26% of their produce from regional growers. (26% X \$11.7 million = \$3.0 million)

INSTITUTIONS

Institutions represent an important potential market channel for local growers because of the large volume of food they serve. Local food advocates around the country have worked with schools, hospitals, and prisons as a few examples, but there are many other possibilities. Four specific institutional markets – summer camps, public schools, colleges and universities, and hospitals – are explored here, each chosen for a particular reason that makes it a good potential market for locally-grown food in the region.

Summer Camps

Natural beauty and a mild climate contribute to a high concentration of summer camps in the region, among the highest concentrations in the nation. The camp season also coincides almost exactly with the growing season in the area, making summer camps a natural potential fit for locally-grown food. In the Spring of 2006 a survey of summer camps to explore the potential of these institutions as a market channel for

How does local food intersect with the tourism industry in WNC?

Tourism is one of the largest industries in North Carolina. The Travel Industry Association reported total tourism expenditures of \$13.3 billion in the state in 2004, up from \$12.6 billion in 2003.¹ The pastoral landscape and scenic views made possible by the region's farms are a major contributor to the industry. In total, one-third of the privately owned land in WNC is farmland.

There are also strong potential connections between farms and restaurants. "Food, drinks and meals" is the number one category of spending for visitors to WNC, including both overnight visitors and those visiting for just a day.¹ According to the International Culinary Tourism Association, tourists are increasingly interested in finding locally grown food in restaurants when they travel, and restaurants that cater to tourists are facing heightened pressure to feature fresh and unique ingredients. This creates good opportunities for local producers to sell farm products to chefs and restaurants.

locally-grown farm products was conducted.⁶⁸ A total of 49 summer camps were identified and surveyed. Twenty-three camps returned a survey for a response rate of 47%.

Twelve summer camps – nearly a quarter of all camps in the region – reported that they had purchased locally-grown farm products in previous years, at rates ranging from less than 1% to just over 15% of total food purchases. The actual dollar amount spent on locally-grown food in 2005 reported by camps completing a survey was between \$25,000 and \$30,000. In total, 30% of summer camps responding to the survey expressed high interest in purchasing locally-grown food.

Using food spending figures reported by 23 camps completing a survey (\$48,250 on average), total food spending for all 49 camps in the region is estimated at \$2.4 million. According to the Produce Marketing Association, produce typically represents 9% of total food purchases for foodservice establishments, which means that summer camps in the region purchase an estimated \$216,000 in produce each year.

Growth in this market should be achievable with some attention given to barriers and motivators reported by camps. The barriers to local purchasing given high ratings by summer camps include coordinating purchase and delivery of locally-grown food, product price, and finding growers with an adequate supply of local products. Motivators given the highest ratings include obtaining better tasting, fresher food; supporting local farmers; health benefits associated with fresher food; and supporting the local economy.

Demand for local produce through the summer camp market channel:

- **Current spending** for local food among summer camps is \$27,500 (Average of \$25,000 to \$30,000 reported by camps).
- **Desired spending** of \$51,840 represents the amount of produce interested summer camps (30% of camps) could purchase given improvements in local food distribution and infrastructure. Since summer camps only buy produce during summer months, an adjustment for *growing conditions* but not *seasonality* is necessary for this group. The corresponding adjustment has camps buying 80% of total produce from regional growers (see p. 38). ($30\% \times 80\% \times \$216,000 = \$51,840$)
- **Maximum spending** of \$172,800 assumes infrastructure improvements plus growth in demand and represents the maximum amount of produce all camps in the region could buy ($80\% \times \$216,000 = \$172,800$).

Public Schools

To determine the extent to which public school districts currently purchase locally-grown foods and to gauge regional interest in farm-to-school programming, a survey of Child

⁶⁸ *Summer Camps as a Potential Market Channel for Locally Grown Food in Western North Carolina*. 2006. Appalachian Sustainable Agriculture Project: Asheville, NC. (Appendix A)

Nutrition Directors (CND) representing public schools across WNC was conducted.⁶⁹ The survey was completed by 19 of 24 CND's for a response rate of 79%.

As a percent of total produce, the amount of locally-grown produce purchased by the five districts currently buying from local producers varied from 2% to 8%. Each of those CND's described their interest in expanding local purchasing, naming issues such as coordinating purchase and delivery and finding an adequate supply of local produce as barriers. Longer term, they acknowledged that growth will depend on resolving storage and delivery infrastructure challenges, such as the need for refrigerated trucks or warehouse space.

More than 70% of districts not currently purchasing local farm products scored their interest in doing so as "7" or higher on a scale from 1 to 10. The 24 districts in the region spend an estimated \$8.5 million on food each year.⁷⁰ Produce may represent 9% of that total, or \$765,000⁷¹ (9% X \$8.5 million = \$765,000).

Demand for local produce through the public school market channel:

- **Current spending** is \$19,000, which reflects actual spending reported by five districts for the 2005-2006 academic year.
- **Desired spending** of \$139,230 reflects local food purchases by interested school districts (70%) using the adjustment for seasonality described on page 38. Although public schools are not able to purchase many items that must be harvested during summer months, they are able to purchase other items (apples, cabbage, potatoes, spinach, e.g.) that can be stored well, harvested during the school year or grown successfully in greenhouses. (70% X 26% X \$765,000 = \$139,230)
- **Maximum spending** of \$198,900 equals 26% of total produce purchases by all 24 public school districts in the region. (26% X \$765,000 = \$198,900)

*Madison County Schools:
Another Link in the Chain*

Brenda Spence, Child Nutrition Director for Madison County Schools, started buying locally grown food fifteen years ago. It all started when a grower who had a hydroponic lettuce operation appeared in her office with lettuce in one hand and flowers in the other. He was growing for the Asheville restaurant market, had overproduced, and was trying to sell the rest of his lettuce. So she bought the lettuce for the schools – because, as she says, “How can you refuse a man with flowers in his hand?” Since then, local food purchasing by Madison County Public Schools has evolved into a much more organized process at a much higher level. With active support from the school board and growing involvement from school cafeteria workers, Brenda has turned her own personal commitment to local farmers into a countywide initiative with far-reaching effects on the farm and in classrooms. One of the most helpful parts of Brenda's buying system is a relationship she's developed with a cooperative group of Madison County farmers. By working closely with these farmers she is able to plan local purchases in advance of the school year and coordinate delivery in quantities that are practical for cafeteria workers to handle.

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⁶⁹ *Defining Success in the Farm-to-School Arena*. 2006. Appalachian Sustainable Agriculture Project: Asheville, NC. (Appendix A)

⁷⁰ This estimate is based on a formula using the number of students times the average lunch participation rate reported by each district times an average cost per meal of \$.92.

⁷¹ Produce Marketing Association.

Colleges and Universities

Colleges and universities have strong potential for local food campaigns because of student activism. Students often have high interest in issues related to buying locally-grown food, such as the environmental benefits associated with reduced food transport. To determine the extent to which WNC colleges and universities purchase or are interested in purchasing locally-grown food a survey of the 17 colleges and universities in the region was conducted. For the survey, 15 schools were interviewed by phone during the 2004-2005 and 2005-2006 academic years for a response rate of 88%.⁷²

During the study period, only three WNC schools reported purchasing local farm products, mostly fresh fruits and vegetables during the growing season. Another four schools expressed high interest in initiating local purchasing, suggesting the size of this market could increase substantially if efforts were taken to meet local purchasing needs of these institutions. Top concerns regarding local purchasing identified through the survey include product price, food safety issues, coordinating purchase and delivery, and locating an adequate supply of local products. As expected, perceived demand from students is a strong motivator for school foodservice directors to purchase locally-grown foods. More than that, however, foodservice directors completing the survey were motivated by a desire to support WNC farmers and the WNC economy.

In dollars, college food spending varies widely based on the type of foodservice provided, whether the school is privately or publicly funded, and how many students are enrolled. Using college food spending estimates from two different sources the following table was developed to estimate food spending by schools in this region:^{73,74}

	Estimated Average Annual Food Budget	Number in WNC	Total
2-year colleges	\$50,000	10	\$500,000
Small scale 4-year colleges (1,200 or fewer students)	\$500,000	4	\$2,000,000
Medium scale 4-year colleges (1,200 to 4,000 students)	\$1,000,000	2	\$2,000 000
Large-scale 4-year colleges (more than 10,000 students)	\$5,000,000	1	\$5,000,000
TOTAL	--	17	\$9,500,000

In the table, total annual spending on food by colleges and universities in the region is calculated as \$9.5 million. Produce purchases are a subset of that, estimated as \$900,000 or

⁷² *Results from a Western North Carolina Farm-to-College Survey*. 2006. Appalachian Sustainable Agriculture Project: Asheville, NC. (Appendix A)

⁷³ *Farm-to-College Survey*. Community Food Security Coalition (www.farmtocollege.org)

⁷⁴ *Industry Census: Campus Dining Revenues*. February 15, 2006. Foodservice Director Magazine.

% of the total based on a PMA estimate that 9% of foodservice food spending is for produce.⁷⁵

Demand for local produce through the college/university market channel:

- **Current spending** is calculated as \$18,450, based on an assumption that the three schools currently purchasing local are purchasing 10% of total produce from local producers. Actual figures are not available.
- **Desired spending** for local food in this market is calculated as \$169,000. This figure represents 26% of total estimated produce purchases for the seven schools that were either currently buying or interested in buying locally-grown food. (Since the average amount schools spend is variable depending on school size and structure, this figure involves a series of calculations.)
- **Maximum spending** among regional colleges and universities is calculated as 26% of total annual produce purchases for all schools in the region. (26% X \$900,000 = \$234,000)

Hospitals

Like summer camps, public schools, colleges and universities, hospitals are a natural fit for local food. With hospitals, providing more nutritious food choices falls within the overall mission of a health care facility to promote health and wellness. The growing number of health problems related to diet and nutrition in our country has brought national attention to these issues. Hospitals use a variety of approaches to incorporating locally-grown food into foodservice. Examples include purchasing local foods available through contracted suppliers, working within out-of-contract percentages to maximize local food purchases, offering expanding nutrition education regarding consumption of fresh fruits and vegetables, and operating farmers' markets on hospital grounds.⁷⁶

To determine the extent to which the 27 regional hospitals are interested in making connections with local farmers a survey of area hospitals was conducted in the summer of 2006. The survey, which consisted of phone interviews of hospital Foodservice Directors (FSD), was completed by 15 hospital FSD's for a response rate of 56%.

Overall, 6 of 15 (40%) hospital FSD's reported that they had purchased some locally-grown food in the past year, including items such as apples, sweet potatoes, and other unspecified fruits and vegetables. Those items were purchased only during the summer months and only in very small quantities relative to the total amount of food purchased, typically less than one percent. Even with differences in hospital size, whether or not foodservice was self-operated or contract managed, and whether the hospital was publicly or privately operated, there was a

⁷⁵ Produce Marketing Association.

⁷⁶ *Healthy Food, Health Hospitals, Healthy Communities: Stories of Health Care Leaders Bringing Fresher, Healthier Food Choices to their Patients, Staff and Communities.* May 2005. Institute for Agriculture and Trade Policy.

high degree of consistency among responses regarding interest in buying locally-grown food. Overall, 13 of 15 hospital Foodservice Directors (87%) expressed high interest in buying locally-grown food, measured as 7 or higher on a scale from 1 to 10.

Despite the high level of interest, Foodservice Directors gave high ratings to nearly every barrier named by interviewers. Not surprisingly, the highest rating was given to the category including contracts and company policies. Several Foodservice Directors emphasized that a contract – either with a vendor/distributor or an outside group purchasing organization – determined where and how they could purchase food. The health benefits of fresher food and perceived higher quality of local food were the two top-rated reasons for interest in buying locally-grown food.

The volume of food served by hospitals in the region is significant. The number of meals served by the 15 hospitals completing a survey ranged from 200 to 1500 per day. In terms of spending, 13 area hospitals reported combined food spending ranging from \$7 to \$8 million per year. Assuming similar spending from the 14 remaining area hospitals, total estimated food spending by regional hospitals would be around \$16 million per year. A rough estimate of produce spending as a proportion of that amount leads to an estimated \$1.28 million in produce purchases by area hospitals each year.⁷⁷

Demand for local produce through the hospital market channel:

- **Current spending** for this market channel is calculated as \$25,600, which represents 5% of produce purchases for 40% of area hospitals that reported purchasing small amounts of locally-grown food in the survey. ($40\% \times 5\% \times \$1.28 \text{ million} = \$25,600$).
- **Desired spending** is calculated as \$289,536, which represents 26% of total produce purchases for interested hospitals (87%), using the seasonality adjustment from page 38. ($87\% \times 26\% \times \$1.28 \text{ million} = \$289,536$)
- **Maximum spending** is calculated as \$332,800, which equals 26% of annual produce purchases for all 27 area hospitals. ($26\% \times \$1.28 \text{ million} = \$332,800$)

⁷⁷ Produce is estimated as 8% of total food purchased, based on information provided in the report: *Industry Census, The GPO Food Dollar*. Foodservice Director, November 15, 2006. www.fsdmag.com.

Chapter 4: Summary of Local Market Potential for Locally-grown Produce

Table 5 has been reprinted from page 34 of the report to summarize **current**, **desired** and **maximum** spending for local produce in large-scale markets in the region.

	Current Spending	Desired Spending	Maximum Spending
Full service groceries	\$5.1 million	\$13.5 million	\$17 million
Specialty food stores	\$100,000	\$234,000	\$936,000
Full-service restaurants	\$117,000	\$760,500	\$3.0 million
Summer Camps	\$27,500	\$51,840	\$172,800
Public Schools	\$19,000	\$139,230	\$198,900
Colleges/Universities	\$18,450	\$169,000	\$234,000
Hospitals	\$25,600	\$289,536	\$332,800
Total (wholesale spending)	\$5,407,550	\$15,144,106	\$21,874,500
Total (retail equivalent)	\$10,815,100	\$30,288,212	\$43,749,000

Source: Various surveys and other research described throughout this section.

The figures from Table 5 are carried over into Table 10 below to generate a single set of figures – combining Direct Sales with spending in large-scale markets – to describe the market potential for locally-grown produce.

Making detailed projections for Direct Sales is problematic because of limited data. As noted previously, USDA data on direct marketing of farm products is widely believed to be both inaccurate and incomplete.⁷⁸ One option is to use the rate of growth from the previous decade as the basis for projections. Direct Sales in the region doubled from approximately \$1.5 million to \$3.1 million between 1992 and 2002, which means that by 2012 they could be as high as \$6.2 million. Although this projection does not account for any flattening of the demand curve (i.e., the likelihood that demand will level out over time), it is reasonable because of expected population growth in the region. In other words, sustained population growth coupled with strong interest in local food means that growth in Direct Sales are likely to continue at a constant, not a declining, rate of growth.

In the framework that uses three levels of demand, \$6.2 million could correspond to **desired spending** since it includes some amount of projection but does not represent a maximum spending figure. It is beyond the scope of this report to calculate a maximum value or upper limit for Direct Sales, so \$6.2 million is listed again in Column 3 as a conservative value for **maximum spending** on local produce in direct market channels.

⁷⁸ *Direct Marketing Today: Challenges and Opportunities*. 2000. Agricultural Marketing Service, USDA.

Table 10: A Summary of Total Market Potential for LOCAL PRODUCE in WNC			
	Current Spending	Desired Spending	Maximum Spending
Total for selected categories of large-scale buyers (Table 5 – retail equivalent)	\$10,815,100	\$30,288,212	\$43,749,000
Direct Sales	\$3,100,000	\$6,200,000	\$6,200,000
Total	\$13,915,100	\$36,488,212	\$49,949,000

From the table, **desired spending** of \$36.5 million represents the retail amount of locally-grown produce WNC businesses and consumers could buy from local producers if changes were made to the way food moves from farm to market in the region.⁷⁹ That value does not reflect changes in tastes and preferences for local food but is calculated as the amount that businesses and consumers could spend based on their interest in local food right now.

Longer term, **maximum spending** of \$50 million represents the amount of spending that could occur if changes in tastes and preferences accompanied improvements to local food infrastructure and distribution systems. In other words, it reflects increased spending linked to increased interest in local food. It is calculated as the maximum amount that could be spent on local produce by the types of buyers examined in this report.

That amount of potential spending represents only a fraction – two percent – of the total \$2.6 billion of food spending by residents and visitors in the region. Subsequent sections of the report will add estimates for spending on meat, dairy and other processed farm products, which are generally higher priced items than fruits and vegetables. Despite the relatively small amount of potential spending on local produce, however, its significance lies in its ability to increase returns to individual farmers and generate additional economic impact to the region as a whole (see box).

⁷⁹ Specific issues involved in moving produce from farm to market are explored in the next section.

What is the potential impact of increased spending on locally-grown produce?

• **Potential for improving individual farm profitability**

Local markets have the potential to improve individual farm profitability. Farmers receive different returns depending on where and how they sell farm products. The highest returns are possible in direct markets where goods are sold to consumers at retail prices. In those cases, farmers earn 100% of the retail price of food. Beyond direct markets, farmers can earn as much as 50% of the retail price of food by selling directly to large-scale buyers. This reflects the assumption that wholesale prices equal approximately half of retail prices, an assumption driving many of the calculations in this report. In other cases, where farmers sell to intermediaries who then resell to local buyers, the farm value share would be somewhat less than 50%, possibly closer to the 25% average farm value share reported for sales of fresh fruits and vegetables in the larger national and global food system.⁸⁰ The following scenarios illustrate how different income streams can impact farmers:

Scenario 1: Farmers sell \$36.5 million worth of produce and earn 25% of the retail value of those sales, or **\$9.1 million**.

Scenario 2: Farmers sell \$36.5 million worth of produce – approximately \$6.2 million direct to consumers (100% farm value share) and the rest split evenly between sales directly to large-scale buyers (50% farm value share) and sales to intermediaries who resell to local buyers (assumed 25% farm value share) – and earn **\$17.5 million**.

Scenario 3: Farmers sell \$36.5 million worth of produce to local markets – approximately \$6.2 million direct to consumers (100% farm value share) and the rest directly to large-scale buyers (50% farm value share) – and earn **\$21.3 million**.

Any number of scenarios is possible. It is important to note that there are also cost implications for farmers selling to local markets. These involve changes in transaction costs, such as the time and effort involved in negotiating sales directly with large-scale buyers or time spent packaging and marketing food at tailgate markets. If transaction costs rise at the same rate as total revenues, the gain to the farmer of selling to local markets will be lost.

• **Potential for Expanded Regional Economic Impact**

The local multiplier effect (LME) is a term first used by economist John Maynard Keynes in his 1936 book *The General Theory of Employment, Interest and Money* to describe the way that dollars are recirculated within a local economy before leaving through the purchase of an import. According to the theory, \$36.5 million of spending on local farm products would add more than that to the local economy as local farmers re-spend the money on products and services in the local community. There are many factors which influence the number of times dollars are thought to recirculate, but LME's are commonly reported to range from 1.5 to 3.0. Within that range, the impact to the local economy of \$36.5 million in spending on local farm products would be \$55 million to \$109 million.

Where does \$36.5 million come from to purchase produce from local farms? If just half of WNC's families spend \$11 each week on locally-grown food for four months of the growing season, over \$36.5 million stays in the local economy helping sustain our family farms.

SECTION 3: Supplying Locally-grown Food to Local Markets

The previous section used spending as a proxy for demand. Potential spending on local food was calculated using different scenarios, first involving improvements in local food distribution and infrastructure and then involving infrastructure improvements plus higher levels of demand. This section uses food consumption estimates to look at demand in a different way. In this case the amount of food that is consumed represents total demand for food in the region. Comparing consumption and production of various types of food helps answer questions related to the capacity of the region's farms to supply local food to its residents. In particular, this section addresses questions such as:

- *How much of each type of food produced here is consumed here?*
- *Is there enough local supply to meet the corresponding level of demand for each type of food produced in the region? and*
- *What infrastructure is needed to supply different types of locally-grown food and farm products to local markets?*

The USDA Economic Research Service maintains three separate but related data series that each look differently at food consumption. The Food Guide Pyramid Servings dataset provides per capita consumption estimates of most categories of foods and includes adjustments for losses in weight that occur along the chain from farm to retailer/foodservice to consumer.⁸¹ Throughout this section, food consumption estimates for the region's consumers are based on this dataset, updated to reflect 2004 levels of consumption.

Talking about supply involves examining the infrastructure of food procurement and distribution.⁸² Beyond direct markets there is a complex, largely hidden system of how food moves from producers to consumers. From grower to consumer food often changes hands at least a dozen times⁸³, moving along a supply chain that links producers, packers, shippers, food manufacturers, wholesale distributors, food retailers, and consumers. In the modern industrialized agricultural system the farmer is no longer at the center of the production process. Farming is just one component of a complex system comprised of agricultural inputs, farm production, processing, distribution and consumption.

In this system, food companies ground their business practices in the logistics of supply chain management in order to streamline product procurement and facilitate greater bargaining power. Supply chain management strategies forge one-on-one (vertical) relationships between dominant food companies, formally linking producers, processors, wholesalers, and retailers.^{84,85} Meat processing firms increasingly contract with producers,

⁸¹ *Food Guide Pyramid Servings Dataset*. Last Updated December, 2005. NASS, USDA.

⁸² For a more thorough examination of these issues, see *The Infrastructure of Food Procurement and Distribution: Implications for Farmers in Western North Carolina*. 2007. The Appalachian Sustainable Agriculture Project: Asheville, NC. (Appendix A).

⁸³ Kloppenburg, J. , J. Hendrickson, and G. W. Stevenson. *Coming into the Foodshed*. 1996. Agriculture and Human Values 13:33-42.

⁸⁴ Kaufman, P. *Consolidation in Food Retailing: Prospects for Consumers & Grocery Suppliers*. 2000. Economic Research Service, USDA.

for example, to provide them with livestock. Large producers want the certainty that comes from dealing with a guaranteed market and processing firms want a guaranteed supply to keep their operations running efficiently. Supply chain management activities link the value chains that transform raw materials and components into finished products for consumers.

Retailers and suppliers are also becoming increasingly interdependent. The growing dominance of large grocery retailers in the food system in recent years has especially engendered a shift in the mechanics of food distribution.⁸⁶ As retailers grow through mergers and acquisitions, they develop their own vertically integrated distribution systems with large food manufacturers and producers. The growing prominence of self-distributing retailers, which manage their own trucking fleets, warehouses, and buying offices, impacts the viability of wholesale markets where retailers traditionally purchased their supplies. Retailer fees (i.e., advertising and failure fees and slotting allowances where suppliers pay for the privilege of stocking their products on shelves) marginalize smaller farmers and smaller scale food businesses unable to assume additional costs.^{87,88} As food manufacturers vie for bargaining power with large food retailers, small and mid-size processors are absorbed into an increasingly smaller number of firms.⁸⁹

As with large food retailers, foodservice businesses seek efficiency gains and lower procurement costs by doing business with fewer numbers of suppliers. Broadline wholesalers, which carry a full range of food and nonfood products, account for 50 percent of foodservice distribution sales.⁹⁰ Broadline wholesalers offer foodservice customers one-stop shopping and a comparative price advantage on a full line of inexpensive food and nonfood products from paper supplies and dishwashing detergent to bulk food items like flour and rice, fresh produce, meats, and thousands of heat and serve items.⁹¹

This section examines the supply of local food in the context of this food distribution system. For each type of food produced in the region it explores production levels as well as issues involved in getting local food into local markets. The section differs from the previous section in one other important way. Whereas Section 2 was limited to describing current and potential demand for fresh produce, this section takes a broader perspective. It includes information about produce, meat, dairy products and other items produced in substantial quantities by the region's farms. At the end of the section more projections are made. This time, instead of a focus on fresh fruits and vegetables, the summary table details projections for all the major types of food produced in the region.

⁸⁵ Hendrickson, M., and W. Heffernan. *Concentration of Agricultural Markets*. 2005. Department of Rural Sociology, University of Missouri.

⁸⁶ Ibid.

⁸⁷ Halweil, B. *Home Grown: The Case for Local Food in a Global Market*. 2002. Worldwatch Paper 163: Worldwatch Institute.

⁸⁸ Hendrickson et. al. 2005.

⁸⁹ Harris, J. M., P. Kaufman, S. Martinez, and C. Price. *The U.S. Food Marketing System, 2002. Competition, Coordination, and Technological Innovations into the 21st Century*. 2002. Economic Research Service, USDA.

⁹⁰ Harris et. al. 2002.

⁹¹ Boser, U. 2007. *Every Bite You Take: How Sysco Came to Monopolize Most of What You Eat*. Slate.com. Electronic document, <http://www.slate.com/id/2138176>, accessed February, 20, 2007.

Chapter 1: Fruits and Vegetables

Table 11 shows the top fruit and vegetable crops in the region. Acreage data should be viewed with caution. In some cases the USDA suppresses county-level data, for example when production is limited or only one or two farms report growing a particular crop. In other cases reported acreage may be higher than actual acreage because of formulas used by the USDA to create county profiles based on limited information.

Vegetables	Acres	Fruits	Acres
1 Snap beans	3114	1 Apples	7502
2 Cucumbers/pickles	875	2 Grapes	174
3 Tomatoes	847	3 Peaches	145
4 Sweet corn	665	4 Berries (all types)	114
5 Pumpkins	275		
6 Squash	211		
7 Peppers (bell, chile)	203		
8 Cabbage	153		
9 Watermelons	75		
10 Broccoli	26		

Source: USDA Census of Agriculture, 2002

All of the crops in Table 11 are also consumed in significant quantities in WNC. Table 12, beginning with Column 1, shows consumption estimates in millions of pounds for selected fresh fruits and vegetables. Column 2 shows acreage needed to grow those amounts, and Column 3 shows how many acres are devoted to growing the crops in the region. Even with

	Column 1: Million pounds consumed in WNC	Column 2: Acres needed to produce that amount	Column 3: Acres devoted to the crop in WNC, 2002
Apples	19	785	7502+
Asparagus	1.1	334	3+
Beans (Snap)	1.9	380	3114+
Blueberries	0.5	119	23+
Broccoli	5.9	398	26+
Cabbage	8.3	376	153+
Carrots	8.8	267	1+
Cauliflower	1.6	10	n/a
Corn (Sweet)	9.2	813	665+
Cucumbers	6.5	564	875+
Grapes	7.9	2915	174+
Lettuce (Head)	21.2	598	2+
Lettuce (Romaine)	11.4	352	1+
Peaches	5.1	1223	145+
Peppers (Bell)	7.0	535	168+
Potatoes	45.8	1229	n/a
Spinach	2.0	140	1+
Strawberries	5.5	440	21+
Tomatoes	20.1	609	847+
Watermelons	13.0	764	75+

Sources: (Column 1) USDA Food Guide Pyramid Servings dataset; (Column 2) National and state average yield data, various sources; (Column 3) USDA Census of Agriculture, 2002, Geographic Series.
+ = minimum

incomplete data, what is clear from Table 12 is that there is significantly more demand (consumption) than supply for nearly every type of fresh fruit and vegetable grown in the region. Achieving a level of supply equal to the level of consumption in this region – essentially matching Column 3 with Column 2 in the table – is not realistic because it assumes year-round production of fresh fruits and vegetables. Rather, there is some point between Columns 2 and 3 that represents a reasonable target for local production in a fully mature local food system. Without sophisticated analysis of soil, climate, and growing conditions it is beyond the scope of this report to say exactly where that point is for any particular food.

Apples, tomatoes, snap beans, and cucumbers are the only crops for which regional production outpaces regional consumption. Interestingly, those are also four of the top processed fruits and vegetables consumed in the region, which means that improving growers’ ability to process fruits and vegetables for local sale may be one way to expand local consumption of local farm products. Identifying the processed products as local is critical if producers are to receive any premium associated with the food being locally-grown.

	Consumption (million pounds)
Processed fruits	
Canned apples/applesauce	4.5
Canned peaches	3.6
Apple juice	2.9
Frozen berries	2.9
Canned pears	2.5
Grape juice	.5
Other processed fruits	17.3
Processed vegetables	
Canned tomatoes	70.4
Canned cucumbers (pickles)	4.6
Snap beans	3.7
Canned carrots	1.2
Other canned vegetables	22.4
Frozen vegetables	77.6
Dehydrated vegetables	14.9

Source: USDA Food Guide Pyramid Servings dataset

The NC Apple Growers Association reports that approximately 40% of apples grown in the state are currently sold fresh and 60% are sold for processed products such as applesauce and juice. Table 13 provides no additional information about production of processed fruits and vegetables in the region because little is known about which foods are processed locally by the region’s growers and in what quantities. There is no central data source – like the Census of Agriculture – for detailed information about processing of farm products. What Table 13

does show is that many items grown in the region are also consumed in large quantities here in processed states.

Processing options for fruit and vegetables within the local food system range from small-scale arrangements like using one of the region's shared-use facilities to large-scale operations which are typically run by corporations. Shared-use facilities provide food entrepreneurs a relatively inexpensive way to license food processing activities; setting-up a commercial kitchen that meets specific federal and state health regulations can be expensive. These small scale processing facilities also create opportunities to expand local food sales through direct markets – particularly to tourists – but they may not be practical for high volume producers.

Large-scale processing used to be widely available in the region, though most facilities are now closed. At least two large-scale juice processors are still operating. Although both processors are currently importing concentrated juice, they provide opportunities for expanding local fruit processing. More research is needed to explore producer interest in local processing, recognizing that growing for processing is in many ways distinct from growing for fresh markets.⁹²

The disparity between production and consumption of fruits and vegetables would be magnified if there were a way to calculate consumption of those same foods by the millions of visitors to the region each year. The best estimate for the region is that there are 21.5 million visits to WNC annually, most of which occur during summer and fall – peak times for harvesting fresh produce in the region. Compared to estimated resident spending at restaurants of approximately \$693 million, visitors have been estimated to spend anywhere from \$363.9 million to \$418.4 million at eating and drinking places in the region.⁹³

Distribution and Infrastructure Issues for Produce

On its way to consumers, produce moves through three primary marketing channels: grower-shippers, wholesalers, and retailers.⁹⁴ In addition to handling their own produce, grower-shippers may also handle produce from other farmers.

Mountain Food Products: Serving the Local Community

Ron Ainspan has operated Mountain Food Products, an Asheville-based food distributor, for twenty years. He began the business with a strong local focus, and over the years has remained committed to supplying the Asheville community with quality food that is as local as possible. As a food purchaser, he respects the value of locally produced foods and wants to contribute to the local farming community. As a seller, he must provide his customers with produce that is at a consistent level of quality, packaging and appearance throughout the year. Ron straddles the divide between growing demand for local products and limited seasonal supply. The small and local scale of Mountain Food Products allows Ron to communicate directly with his suppliers and customers and to pass on detailed information about the origins of the products he offers. This creates a unique opportunity to maintain the identification of locally grown food through the value chain from producer to distributor to retailer and consumer using the Appalachian Grown™ certification system.

Read the full case study, page 14B

⁹² Lucier, G., S. Pollack, M. Ali, and A. Perez. *Fruit and Vegetable Backgrounder*. 2006. Economic Research Service, USDA.

⁹³ See page 31 for an explanation of the figures cited in this paragraph.

⁹⁴ Handy, C. R., P. R. Kaufman, K. Park, and G. M. Green. *Evolving Market Channels Reveal Dynamic US Produce Industry*. 2000. *FoodReview* 23:14-20.

They own the packing sheds that assemble, wash, and pack produce and perform the post-harvest handling and packing activities that contribute to the final cost of fresh produce at the retail level. From grower-shippers, produce moves to wholesalers, self-distributing retailers and foodservice companies.

Wholesalers, the next vertical stage in produce distribution, can be merchant wholesalers or brokers.⁹⁵ In moving produce from grower-shippers to various retail outlets, merchant wholesalers take title of the product they handle; brokers, while also serving as intermediaries for grower-shippers or for wholesale or retail buyers of produce, do not take ownership of the produce. The majority of wholesalers are merchant wholesalers, which include broadline grocery wholesalers, broadline foodservice wholesalers, and specialized fresh fruits and vegetables wholesalers. In serving retail stores and foodservice establishments, specialized produce wholesalers deal exclusively with fresh fruits and vegetables.

Broadline grocery and foodservice wholesalers procure a wide range food as well as nonfood products. Grocery wholesalers serve individual stores or grocery chains that do not operate their own produce buying offices, warehouses, or trucking fleets. Foodservice wholesalers procure products specifically for foodservice establishments including restaurants, hospitals, hotels, and schools. Foodservice wholesalers are handling an increasing share of produce moving through market channels, reflecting growth in the foodservice industry along with growth in demand for convenience foods.⁹⁶

At the same time, the role of food wholesalers as mediators between manufacturers and retail food stores is on the decline. Today, more produce is shipped directly from grower-shippers to large retailers that operate their own distribution centers. These self-distributing grocery retailers, which also have their own buying offices and trucking fleets, circumvent wholesalers and forge direct supply agreements with grower-shippers.⁹⁷

*Shelton Farms: Finding a
Space in the Middle of
Agriculture*

With eight greenhouses in full hydroponic lettuce production, Shelton Farms produces roughly 10,000 to 12,000 heads of bibb lettuce per week. This places the farm in a size bracket that is beyond that of most farms in the region, and means that the farm's production exceeds the capacity of local direct markets. On the other hand, this scale of is not large enough for the farm to rely on national commodity markets. Owner William Shelton finds himself caught between two potentially successful marketing strategies, neither of which can fully accommodate his farm.

William utilizes a complex network of local and national distributors to get his lettuce into both national and local stores. By growing specialty products of high quality that can bring a premium price, building strong personal relationships with buyers and distributors, and being flexible in his packaging, William has successfully crafted a space for his products in a system that is providing infrastructure and marketing challenges to farms of his size across the country.

Read the full case study, page 10B

⁹⁵ Ibid.

⁹⁶ Davis, D. E., and H. Stewart. *Changing Consumer Demands Create Opportunities for U.S. Food System*. FoodReview 2002:19-23

⁹⁷ Handy et al. 2000.

WNC producers can access niche markets by selling directly to consumers or in some cases by delivering directly to small and independently-owned retail outlets that retain the flexibility to buy directly from producers. Market segments that have embraced supply chain management practices—larger grocery store and restaurant chains and institutional buyers, for example—pose the greatest challenges to the small and mid-size producers that dominate farming in the region. The ability of farmers to access these markets depends on a retailer's system of procurement and distribution and the ability of farmers to satisfy volumes and price points, desire for year round produce, and post-harvest handling and packaging requirements. In addition, the use of centralized warehousing systems for distribution among chain outlets limits the ability of individual farmers to deal directly with individual restaurants or grocery stores.

Regionally-based systems of food procurement and distribution hold the potential to help local farmers overcome market constraints. With increasing demand for local food, these systems are potential points of intervention that with further development could create space for smaller local farmers in a tightly integrated market.

What are some points of intervention for expanding local markets for produce in WNC?

Backhauling

To maximize fleet utilization on return trips and expand the spectrum of product movement, self-distributing retailers that operate their own buying offices and own refrigerated trucking fleets are able to pick-up produce from farmers for further distribution to individual store locations. This process is known as backhauling. In WNC, Ingles Markets operates a limited backhauling program in which produce from two mid-size farmers in the region are trucked to the company's distribution warehouse in Black Mountain, NC for further distribution to each Ingles store.

Pooling of production

Locally-based packing houses, wholesale distributors and farmer cooperatives all allow for pooling of production, which gives smaller local farmers the ability to capture marketing and distribution advantages that come with larger scale. Wholesalers and packing houses, accustomed to marketing fresh produce, have the knowledge needed to meet the specifications of particular market segments and the infrastructure to cool, grade, package, and transport local farm products to different locations. As models of distribution, packing houses and wholesale operations also have the ability to meet the desire of local buyers for year round supplies because, in addition to handling local product, they also handle the produce of growers from other parts of the country. Labeling is critical in these situations as a way to differentiate local products and ensure that farmers receive any premium associated with the food being locally grown. Farmer cooperatives increase individual farmers' collective power. By pooling resources and sharing marketing, transportation, and distribution costs, cooperatives have the potential to help farmers overcome market constraints associated with the lack of post-harvest handling and packaging equipment and adequate transportation to deliver to different markets. In WNC, a number of farmer cooperatives have formed to obtain equipment needed to meet the standards of different market segments and reach institutional markets like hospitals and school cafeterias and larger grocery retail chains.

The WNC Farmers' Market

The WNC Farmers' Market represents a substantial piece of infrastructure for farmers in the region who wish to sell their products locally. The market is one of five farmers' markets owned by the state of North Carolina and operated by the North Carolina Department of Agriculture and Consumer Services (NCDA&CS). The WNC Farmers' Market is a marketing hub. Farmers have opportunities for large and small scale, direct sale and wholesale and year-round marketing of farm products. On the WNC Farmers' Market site farmers can sell direct to consumers or to small food related businesses. Farmers can also sell wholesale to vendors that maintain a space in the retail section of the market and to packers, wholesalers, and farmer cooperatives that maintain wholesale spaces to sell to grocery stores, restaurants, institutions, and roadside markets. Again, adequate labeling of local food is the only way buyers will be able to act on their preferences for locally grown food and farm products. Currently, a large percentage of the produce that moves through this facility comes from farms outside of WNC.

Chapter 2: Meat and Poultry

Meat and dairy production is the largest segment of the U.S. agriculture economy. In 2004 livestock, poultry and dairy receipts totaled \$123.5 billion nationally compared to \$117.8 billion in receipts from all crops. In North Carolina, those figures were \$5.4 billion and \$2.9 billion, respectively. In WNC, receipts from meat and dairy products totaled \$293.7 million – 54% of all cash receipts from farming – and all other crops earned \$249.3 million.⁹⁸ In general, meat and dairy products earn higher prices than other crops because of higher costs of production, not because they are inherently more profitable. Given substantial differences in infrastructure for local meat and dairy production, this chapter focuses on meat production and distribution and the next chapter focuses on dairy products.

Table 14 offers a comparison of production and consumption data for meat in the region. The figures reported for beef and chicken production do not accurately reflect the type of local production that is available for local consumption. In the case of chicken, for example, more than 90% of all broilers produced in the region are in Wilkes County, where Tyson Foods™ operates three processing facilities. The broiler industry is heavily vertically integrated, which means that one firm (in this case Tyson Foods™) provides everything from processing to packaging to marketing the meat. Many poultry producers in Wilkes County are likely contract growers for Tyson Foods™. The actual amount of chicken that is processed either on-farm or in independent processing facilities and sold locally is probably far less than the 98.4 million pounds consumed in the region.

	2004 Consumption (million pounds)	2004 Production (million pounds)
Beef	161.5	63.5
Chicken (broilers)	98.4	629.4
Pork	94.1	1.5
Lamb	65.6	n/a
Turkey	17.0	<.01

Source: The figures in the table are based on a series of calculations combining data from the 2002 USDA Census of Agriculture and the Agriculture Statistics division of the NCDA&CS.

Of the approximately 63.5 million pounds of beef produced in the region, only a very small amount of beef is actually finished and processed in the region and marketed locally. Producers who do sell locally often raise grass-fed or grass-finished beef using independent processing facilities and sell their product on-farm, at area farmer tailgate markets, or through local retail and restaurant grocery outlets. This is distinct from meat sold in traditional commodity markets. The beef supply chain is described in detail in the breakout box below.

⁹⁸ USDA Census of Agriculture, 2002.

How does beef move from farm to market in the global food system?

The beef supply chain encompasses cow-calf operations, feedlot operations, packing plants and processors, wholesale distributors, and retailers and foodservice operators. The process begins with cow-calf production. In this kind of operation, the product is the calf. Cow-calf producers breed animals and raise them on range or open pasture land for up to one year. From there, calves are sold to other beef cattle operations.

When cattle have reached a suitable weight, “feeder” weight, they are sold through livestock auction markets in different locations, which transfers ownership to feedlot operators. Most calves go to feedlot operations located in the Midwest, the Southwest, and the Pacific Northwest where there are abundant supplies of grain to continue feeding the calves. In feedlot operations cows are finished in three to six months, weighing between 1000 to 1200 pounds. Some calves, before going to feedlot operations, may be backgrounded. Backgrounder calves are lighter in weight and are purchased by “stockers” another type of intermediary that puts calves on pasture until they are ready to go to feedlots.

Feedlots have or own marketing arrangements with meat packing plants. Once cattle have reached slaughter weight they are purchased by the plants. Packing facilities process the animals and sell them to retailers and foodservice operators by means of intermediary wholesale distributors. Some plants sell to other intermediary processors for further processing before the products are sold to retailers and foodservice operators.

With the long chain from farm to table involving multiple intermediaries, the farm value share of meat sold in commodity markets is relatively low. Most recently, the farm value share for meat was reported as 31%, which means that farmers earn 31 cents of every retail dollar of beef sold in commodity markets.⁹⁹

-- Source: National Cattlemen’s Beef Association.

Distribution and Infrastructure Issues for Meat

Meat producers in the region currently have three options for selling their products. The first involves raising animals and then selling to an intermediary who arranges for processing and sale. Producers selling meat in this way are susceptible to the cycles of supply and demand that determine commodity pricing.

A second option is to have the meat processed in an independent, government-inspected facility. With this option the farmer maintains control over where the product is sold and may be able to earn a premium by selling in local markets. The absence of independent meat processing facilities in the region means that farmers wishing to have their meat processed in this way must travel long distances to do so. Additional costs (time and money) associated with travel for processing makes this an unattractive option for many producers.

A third option for meat and poultry producers involves on-farm processing. State guidelines limit the number of small animals that may be processed on-farm to 1,000 chickens or rabbits or 250 turkeys per year per farm, which means that this option is not practical for large- or even medium-scale producers. For large animals, on-farm processing is not practical given

⁹⁹ *CPI, Consumption and Prices Briefing Room.* Economic Research Service, USDA.

the strictness of the regulations for becoming licensed to process those animals. On-farm processing guidelines vary from state to state and some states carry less restrictive guidelines than NC.

Overall, there is tremendous potential for expanding local markets for locally produced meat and poultry based on the small amount that is currently being processed and sold locally. There is also growing demand for naturally raised meat and poultry by health conscious consumers and those concerned with animal welfare.^{100, 101} Much of the land in WNC is suited for grazing, and regional cow-calf producers, motivated by local consumer interest, are exploring the possibility of expanding into the grass-fed beef market. A separate group is exploring the feasibility for establishing a regional, independent USDA-inspected small animal processing facility for processing poultry and rabbit meat.¹⁰²

Access to a government-inspected processing facility is the principal infrastructure obstacle for any type of meat, but grass-fed and -finished beef also requires land for pasture, on-farm animal handling facilities and adequate cold storage for processed meat products. To shift into this type of production, cow-calf producers would need to learn and adopt new practices including, for example, more closely managed grazing and pasture management.

Chapter 3: Dairy Products

Table 15 shows that an estimated 253.8 million pounds of milk were produced in the region in 2002. Some portion of that amount is marketed as fluid milk and some is used to make cheese and other processed dairy products. No information is available from government sources detailing the end uses of milk produced in the region.

	Consumption (million pounds) 2004	Production (million pounds) 2002
Fluid milk	192.3	253.8 *
All cheese	28.9	n/a
All frozen dairy	26.4	n/a
Yogurt	9.2	n/a
Butter	4.6	n/a

*Production data for milk is derived from USDA Census of Agriculture data (14,287 milk cows in WNC in 2002) combined with production statistics provided by NCDA (17,766 average pounds of milk per cow in NC in 2002).

Large scale local cheese production in WNC occurs primarily through the Ashe County Cheese Store, which produces around 2.3 million pounds of cheese per year. Some small

¹⁰⁰ Freeman, S. *Livestock Farms Grow in W Mass.* 2007. The Republican online, <http://www.masslive.com/springfield/republican/index.ssf?/base/news-1/117308602410530.xml&coll=1>

¹⁰¹ Ness, C. *Au Revoir to Foie Gras: Wolfgang Puck is Biggest Name Yet to Ban Delicacy from His Restaurants' Menus.* 2007. www.SFGate.com.

¹⁰² More information available from the Center for Assessment and Research Alliances, Mars Hill College.

dairy farmers have focused on reaching niche markets with production of value-added products like artisan cheese, yogurt, butter, and frozen dairy products, though the total amounts produced are very small. These producers typically sell directly to consumers at tailgate markets or on-farm stores or by delivering directly to restaurants or local retail grocery outlets.

Based on the estimated amount of raw milk needed to produce fluid milk and cheese it would take approximately 381.3 million pounds of milk to meet the region's demand for those two products alone.¹⁰³

Distribution and Infrastructure Issues for Dairy Products

Dairy farms are more specialized than other farm operations and accordingly have particular equipment and facility needs. They require facilities to milk cows and to store and cool milk, and they need equipment to test milk for antibiotics, bacteria, and somatic cell counts before it is picked up by milk haulers. Dairy farmers also tend to have fewer sources of off-farm income than other farmers, making them more dependent on farm-generated income. Taken together, these factors make dairy farms particularly susceptible to price volatility, which has been severe in the industry in recent years.¹⁰⁴

Dairy farming is also unique because milk is marketed cooperatively within the framework of a federal program for milk marketing.¹⁰⁵ The Federal Milk Marketing Order program is designed to stabilize market conditions and benefit both producers and consumers. The program assures that dairy farmers receive a reasonable minimum price for their milk throughout the year; all producers in a particular market order are paid a blend or pool price based on total market uses of milk including fluid sales and other dairy products. For consumers, the program guarantees an adequate supply of milk and helps prevent wide price fluctuations during periods of heavy and light milk production.

Dairy farmers in the region typically belong to one of three marketing organizations: Dairy Farmers of America, a national cooperative; Piedmont Milk Sales Inc., a milk broker; or a regional cooperative, the Maryland and Virginia Milk Producers Coop. Fluid milk or cheese processors contract directly with these marketing organizations for much larger amounts of milk than any individual farmer could provide. When there is a shortage of milk availability in the region (due to seasonal fluctuation in production levels, for example) milk is imported from other areas of the country. The cooperatives pay part of the transportation costs for the imported milk, which reduces the price that the dairy farmer members receive.

Dairy farming in WNC, as in other regions, is mainly a family operation. Of 68 regional dairy farmers completing a survey in 2006, 100% identified their farms as family farms.¹⁰⁶

¹⁰³ The Ashe County Cheese Store estimates that approximately 100,000 pounds of fluid milk are used to make 10,000 pounds of cheese.

¹⁰⁴ Miller, J. J., and D. P. Blayney. *Dairy Backgrounder*. 2006. Economic Research Service, USDA.

¹⁰⁵ *Federal Milk Marketing Orders*. Agricultural Marketing Service, USDA.
www.ams.usda.gov/dairy/orders.htm.

¹⁰⁶ *A Survey of Licensed Dairies in Western North Carolina*. 2007. Appalachian Sustainable Agriculture Project: Asheville, NC. (Appendix A)

More than 90% also reported that their family had been operating the dairy for 30 years or more. Given this long history of dairy farming in the region, the fact that more than a third of survey respondents indicated they might not be able to continue operating the dairy for long is alarming. Reasons given by farmers for the likelihood of selling or closing down their dairy operation included extremely low prices paid for milk and pressure from developers interested in buying their land.

A decrease in the number of dairy farms in NC from 1,139 in 1985 to 350 in 2005 indicates that dairy farming in the state is in a significant period of decline.¹⁰⁷ In part these numbers also reflect consolidation and concentration that has occurred in the dairy industry in recent years. From 1970 to the early 2000s, for example, the number of dairy operations in the U.S. decreased from about 650,000 operations to about 90,000, and average herd size increased five-fold from 20 cows to 100 cows.¹⁰⁸ In WNC most dairy farms are relatively small. More than three quarters of dairy farmers surveyed in the region reported average herd size of fewer than 200 cows, and only one could be considered very large, reporting an average of 800 cows in inventory.¹⁰⁹

The infrastructure for large-scale milk processing and distribution still exists in WNC. MilkCo, an Asheville-based milk processing and packaging plant, produces 53 million gallons of milk annually – approximately 450.5 million pounds. – using a combination of milk from WNC dairies and dairies in other parts of the Appalachian Federal Milk Market Order and from milk imported from other regions. Milk processed at MilkCo provides Ingles Markets with nearly all of its fluid milk needs. A rough estimate is that 80% of the fluid milk processed at MilkCo comes from regional dairies and the remaining amount is imported from other regions.¹¹⁰ The Ashe County Cheese Store uses approximately 23 million pounds of milk annually to produce 2.3 million pounds of cheese, again using mostly milk from regional dairies in combination with milk imported from other regions.¹¹¹

Linking regional milk production with regional milk consumption is complicated by the fact that local milk and imported milk are pooled during processing. While 85% of WNC dairy farmers surveyed answered yes when asked whether they could benefit from a labeling or promotional program identifying their milk as locally produced, the logistics of such a program are complicated. More research is needed to determine whether such a program would be feasible and cost-effective.

According to producers, organic milk production is not practical in the region right now. This is important because of growing demand for organic milk nationwide and the possibility that farmers could earn a premium by selling milk certified as organically produced.¹¹²

¹⁰⁷ Agricultural Statistics Division, North Carolina Department of Agriculture & Consumer Services.

¹⁰⁸ Miller and Blayney. 2006.

¹⁰⁹ *A Survey of Licensed Dairies in Western North Carolina*. 2007. Appalachian Sustainable Agriculture Project: Asheville, NC. (Appendix A)

¹¹⁰ Personal communication, Buddy Gaither of MilkCo.

¹¹¹ Personal communication, Ashe County Cheese Store.

¹¹² Dimitri, C. and C. Greene. *Recent Growth Patterns in the U.S. Organic Foods Market*. 2002. Economic Research Service, USDA..

The cost of grain and the lack of availability of organic grain were the top two barriers rated by survey respondents regarding organic milk production.¹¹³ Other barriers given high ratings include (in order) the expense of transitioning, the certification process, and concerns about the health of the herd. Overall, only four dairies completing a survey expressed interest in producing organic milk.

Chapter 4: Other Food

There are other types of food not included in previous chapters that are produced in relatively large quantities in the region. North Carolina ranks second in the nation in trout sales, for example, most of which occur in WNC. Forty-seven commercial trout operations in the state sold \$7.2 million worth of trout in 2006.¹¹⁴

Wine production may also be significant, though detailed figures for WNC wine production are not available. Since 2000, North Carolina's grape acreage has more than doubled to 1300 acres in 350 vineyards. In the same period total grape production increased by more than 70%, enabling North Carolina to become both the 10th largest wine producer and 10th largest grape producer in the US.¹¹⁵ The total value of wine production in the state was estimated at \$34 million in 2005.¹¹⁶ With 12 of 62 wineries in the state located in WNC, wine production in the region can be estimated at around \$6.8 million (19% of state total).

Closely related to poultry production, an estimated 2.5 billion eggs were produced in North Carolina in 2002 for a value of \$228.7 million.¹¹⁷ In WNC, those figures were 144.8 million eggs and \$13.2 million in 2002. That compares to 254 million eggs that are consumed in the region annually.

Each of those products – and some others which are not highlighted – makes an important contribution to the region's overall food and farm economy. Distribution systems for those products are different enough from other products covered in this section that they are excluded from chapters 1 through 4. While limited staff time and resources prevented thorough exploration of the potential for expanding local markets for trout, wine, and eggs, future food system research should include more information on those products.

Chapter 5: Summary of Local Market Potential for Locally-grown Food

This chapter relies on the same type of analysis used to describe demand for produce in Section 2, but the focus is broadened to encompass all categories of food produced in the region. Projections are made for local food spending by similar categories of organizations used in Section 2 – retail food stores, full-service restaurants, summer camps, public schools,

¹¹³ *A Survey of Licensed Dairies in Western North Carolina*. 2007. Appalachian Sustainable Agriculture Project: Asheville, NC. (Appendix A)

¹¹⁴ *Agricultural Statistics*. 2005. NCDA&CS.

¹¹⁵ *Economic Impact of North Carolina Wine and Grapes*. 2007. MKF Research: St. Helena, CA.

¹¹⁶ NC wine production statistics and winery information obtained from www.ncwine.org.

¹¹⁷ *Agricultural Statistics*. 2005. NCDA&CS.

colleges, universities, and hospitals – which in turn supply most of the \$2.6 billion worth of food consumed by the region’s residents and visitors.

Positioning these projections at the end of this section is a way to acknowledge that they depend on major changes to the food production and distribution system. More than 7,000 farms in the region produce some meat and dairy products, yet in the current food system these products are available to local markets only in very limited quantities. These projections imply substantial changes to infrastructure and distribution systems but are grounded in that they are based on measured demand from consumers, businesses and institutions.

As in the summary table at the end of Section 2, the three columns in Table 16 (next page) represent different types of spending: **current spending**, which is estimated to reflect actual spending on locally-grown food; **desired spending**, which equals the amount interested organizations could buy given availability and improvements to local food distribution and processing infrastructure; and **maximum spending**, which reflects improvements in infrastructure plus changes in tastes and preferences such that every organization in each category has high interest in buying locally-grown food.

Table 16: A Summary of Larger Scale Markets for LOCAL FOOD in Western North Carolina			
	Current Spending	Desired Spending	Maximum Spending
Full-service groceries	\$5.4 million	\$189.2 million	\$236.6 million
Specialty food stores	\$105,000	\$3.3 million	\$13.2 million
Full-service restaurants	\$122,850	\$13.0 million	\$51.9 million
Summer Camps	\$28,875	\$336,000	\$1.1 million
Public Schools	\$19,950	\$2.4 million	\$3.4 million
Colleges/Universities	\$19,373	\$1.6 million	\$4 million
Hospitals	\$26,880	\$5.6 million	\$6.4 million
Total (wholesale spending)	\$5,722,928	\$215.4 million	\$316.6 million
Total (retail equivalent)	\$11,445,856	\$430.9 million	\$633.2 million

- **Column 1** includes current spending on local produce from Section 2 plus an additional 5% to account for small amounts of processed fruits and vegetables, meat, cheese, eggs, and other locally produced foods that are currently sold to local markets. Actual spending on locally produced milk is likely much higher than these amounts because of the significant infrastructure for producing local milk that exists in the region. In total, the region’s residents consume an estimated \$30.2 million worth of milk.¹¹⁸
- **Column 2** is the estimated amount of local food interested organizations would buy if they could get as much as they wanted. The level of interest and dollar amount of total food spending for each group is detailed in Section 2. A new assumption here is that interested buyers could spend 40% of their total annual food budget on locally-grown

¹¹⁸ This calculation is based on total milk consumption of 192.3 million pounds in the region and average milk prices between 2001 and 2005 of \$15.68 per hundred-weight (NCDA, Ag Statistics Division).

foods. This figure is based on two unrelated pieces of information about the breakdown of food spending. First is that consumers spend an average of 45% of their annual food budget on foods that could be produced by the region’s farms – fresh and processed fruits and vegetables, meat, poultry, eggs and all types of dairy products.¹¹⁹ Second is that on behalf of at least some types of large-scale buyers, Group Purchasing Organizations (GPO’s) spend roughly 40% of their total annual food budget on meat, fresh produce, milk, eggs, cheese and processed fruits and vegetables – again, nearly all of which could be produced locally.¹²⁰

- **Column 3** represents an upper limit or maximum amount of spending on local food, calculated as 40% of estimated food spending for *all* organizations in each category.

The same formula used throughout the report – in which wholesale prices are estimated to equal half of retail prices – is used to equate the wholesale spending figures to retail equivalent values. Those retail values are then carried over into Table 17 (next page) to generate a single set of figures to describe the total market potential for locally-grown food in WNC.

At the end of Section 2, Direct Sales were projected to grow at the same rate over the next ten years as they grew in the previous ten years. That rate of growth implies that future Direct Sales are, much as they are now, mostly fruit and vegetable sales. For this set of projections – which relies on a longer term perspective and involves substantial improvements to processing and distribution systems for local meat, poultry and dairy products – a different set of assumptions may be more appropriate which would project Direct Sales to reach \$21 million by 2016.¹²¹

In the framework that uses three levels of demand this could still be called **desired spending** since it involves some level of projection but is not intended to represent a maximum spending figure. Rather than calculating an upper limit for Direct Sales, \$21 million is listed again in Column 3 to provide an estimate for **maximum spending** in direct markets.

	Current Spending	Desired Spending	Maximum Spending
Total for selected categories of large-scale buyers (Table 16 – retail equivalent)	\$11,445,856	\$430.9 million	\$633.2 million
Direct Sales	\$3,100,000	\$21.0 million	\$21.0 million
Total	\$14,545,856	\$451.9 million	\$654.2 million

¹¹⁹ *Consumer Expenditure Survey*, Bureau of Labor Statistics.

¹²⁰ *Industry Census: The GPO Food Dollar*. November 15, 2006. Foodservice Director Magazine. (Note: A GPO is an entity that leverages the purchasing power of a group of businesses, e.g. hospitals, to obtain discounts from vendors based on the collective buying power of the GPO members.)

¹²¹ This assumption calculates Direct Sales as a proportion of total sales. Whereas Direct Sales represented 0.6% of total cash receipts from farming in the region in 2002, this projection calculates Direct Sales as 3% of total cash receipts from farming. The value of cash receipts is based on USDA projections to 2016.

From the table, \$284.2 million represents the amount of locally-grown food WNC businesses and consumers could buy from local producers if changes were made to the way food moves from farm to market in the region. That value does not reflect changes in tastes and preferences for local food, but is calculated as the amount that businesses and consumers could spend based on their interest in local food right now.

An important distinction between potential spending detailed in this table and potential spending from Table 10 at the end of Section 2 is that there are significant differences in the types of infrastructure improvements needed to achieve **desired** or **maximum** spending. For example, moving fresh produce from farm to market may require refrigerated trucks and storage facilities, but moving meat from farm to market could require those things plus local facilities for processing the food. So \$654.2 million should be regarded as a very long-term goal linked to substantial changes in local food production and distribution systems plus increased spending linked to increased interest in local food.

As before, the significance of any spending on locally-grown food lies in its potential to increase returns to individual farmers and generate additional economic impact to the region. The breakout box at the end of Section 2 is repeated on the next page with figures updated to reflect spending on *all types* of food and farm products.

What is the potential impact of increased spending on all types of locally-grown food?*

• **Potential for improving individual farm profitability**

Local markets have the potential to improve individual farm profitability. Farmers receive different returns depending on where and how they sell farm products. The highest returns are possible in direct markets where goods are sold to consumers at retail prices. In those cases, farmers earn 100% of the retail price of food. Beyond direct markets, farmers can earn as much as 50% of the retail price of food by selling directly to large-scale buyers. This reflects the assumption that wholesale prices equal approximately half of retail prices, an assumption driving many of the calculations in this report. In other cases, where farmers sell to intermediaries who then resell to local buyers, the farm value share would be somewhat less than 50%, possibly closer to the 20% average farm value share reported for all types of food in the larger national and global food system.¹²² The following scenarios illustrate how different income streams can impact farmers:

Scenario 1: Farmers sell \$452 million worth of produce and earn 20% of the retail value of those sales, or **\$90 million**.

Scenario 2: Farmers sell \$452 million worth of produce – approximately \$21 million direct to consumers (100% farm value share) and the rest split evenly between sales directly to large-scale buyers (50% farm value share) and sales to intermediaries who resell to local buyers (assumed 20% farm value share) – and earn **\$171.8 million**.

Scenario 3: Farmers sell \$452 million worth of produce to local markets – approximately \$21 million direct to consumers (100% farm value share) and the rest directly to larger scale buyers (50% farm value share) – and earn **\$236.5 million**.

Any number of scenarios is possible. It is important to note that there are also cost implications for farmers selling to local markets. These involve changes in transaction costs, such as the time and effort involved in negotiating sales directly with large-scale buyers or time spent packaging and marketing food at tailgate markets. If transaction costs rise at the same rate as total revenues, the gain to the farmer of selling to local markets will be lost.

• **Potential for Expanded Regional Economic Impact**

The local multiplier effect (LME) is a term first used by economist John Maynard Keynes in his 1936 book *The General Theory of Employment, Interest and Money* to describe the way that dollars are recirculated within a local economy before leaving through the purchase of an import. According to the theory, \$452 million of spending on local farm products would add more than that to the local economy as local farmers re-spend the money on products and services in the local community. There are many factors which influence the number of times dollars are thought to recirculate, but LME's are commonly reported to range from 1.5 to 3.0 times. Within that range, the impact to the local economy of \$452 million in spending on local farm products would be \$678 million to nearly \$1.4 billion.

*The figures used in this illustration are from Table 17.

Where does \$452 million come from to purchase produce from local farms? If just half of WNC's families spend \$10 each week on locally-grown food \$452 million would stay in the local economy helping sustain mountain farms.

¹²² *CPI, Consumption and Prices Briefing Room*. Economic Research Service.

SECTION 4: Understanding the Gap between Demand and Supply

The previous two sections of this report demonstrated a gap between demand and supply of locally-grown food in the region. Section 2 showed that many retailers, restaurants, and institutions that have high interest in buying locally-grown food are either not buying it at all or buying it in small quantities relative to the total amount they could be buying. Section 3 showed that for each of the major types of food produced in WNC, only a fraction of all food consumed by the region's residents is produced by the region's farms. Partly that represents an opportunity for local farmers to expand production to serve local markets, but to suggest that expanding production is the answer would be overly simplistic.

After examining data that illustrates the gap, this section explores why it exists by reviewing barriers to advancing the local food system in the region. The list of barriers is based on information provided by various stakeholder groups, including NC Cooperative Extension agents, local food advocates working in nonprofit and academic organizations in the region, selected groups of farmers, and potential buyers of local food.

Chapter 1: Defining the Gap

Two sources of data are used to illustrate the gap between supply and demand of locally-grown food in the region. One is an online survey for consumers regarding various types of food they purchase or would like to purchase from local producers. The survey was completed by 87 consumers who currently buy local food direct from farmers in tailgate markets, through CSA programs, on-farm retail, or roadside stands. The second is a written questionnaire mailed to organizational buyers of local food, including 69 businesses that were listed in ASAP's *Local Food Guide* in 2006 and 33 other organizations with high interest in local food (based on information provided in market surveys described in Section 2). Responses were received from 40 organizations surveyed, for a response rate of 39%.

It is important to note that both surveys were part of a feasibility study examining interest in locally produced poultry and rabbit meat as they relate to the need for an independent, government-inspected small animal processing facility in the region. The fact that both surveys featured more questions about poultry and rabbit than any other type of food may have skewed the results to overemphasize interest in those products. Also, survey respondents likely had higher interest in meats than non-respondents.

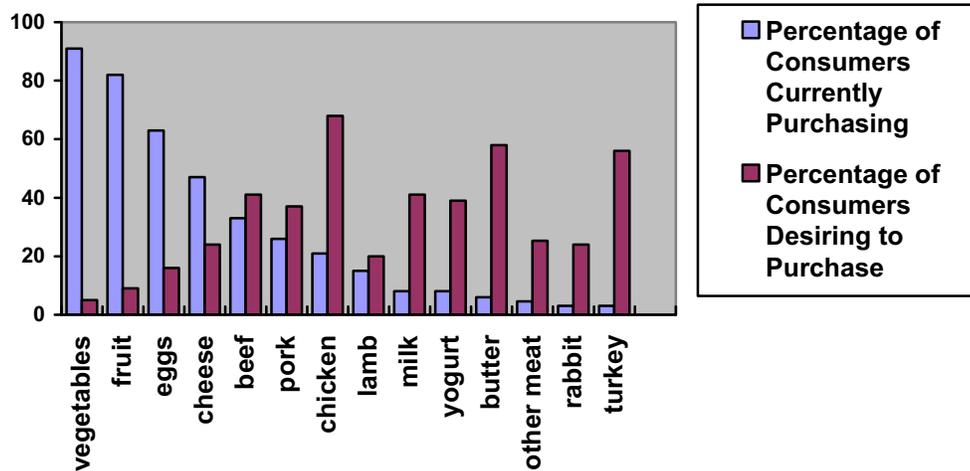
It is also important to recognize that the surveys to consumer and organizational buyers described in this chapter were targeted to highly motivated buyers, that is, buyers with established high interest in local food. Setting aside the basic question of interest in local food, then, the purpose of this analysis is to help answer questions such as:

- Are businesses and consumers with high interest in locally-grown foods able to get the foods they want from local producers? and
- If not, which foods are they able to get?

Consumer Data

Consumers completing the online survey were asked to name which categories of food they currently purchase and which categories of food they would like to purchase direct from local farmers. In Figure 6, this information is presented visually to show that there is significant unmet local demand for most categories of meat and dairy products. The unmet demand is represented by the percentage of consumers who want a particular type of local food but are not currently buying it. These data do not show whether consumers are able to get as much as they want of any particular type of locally-grown food, simply whether or not they can get it at all.

Figure 6: Local Food Purchasing by Highly Motivated Consumers in WNC



Note: The high percentage of consumers interested in poultry and rabbit meat may reflect the fact that this survey was part of a needs assessment for a local meat processing facility.

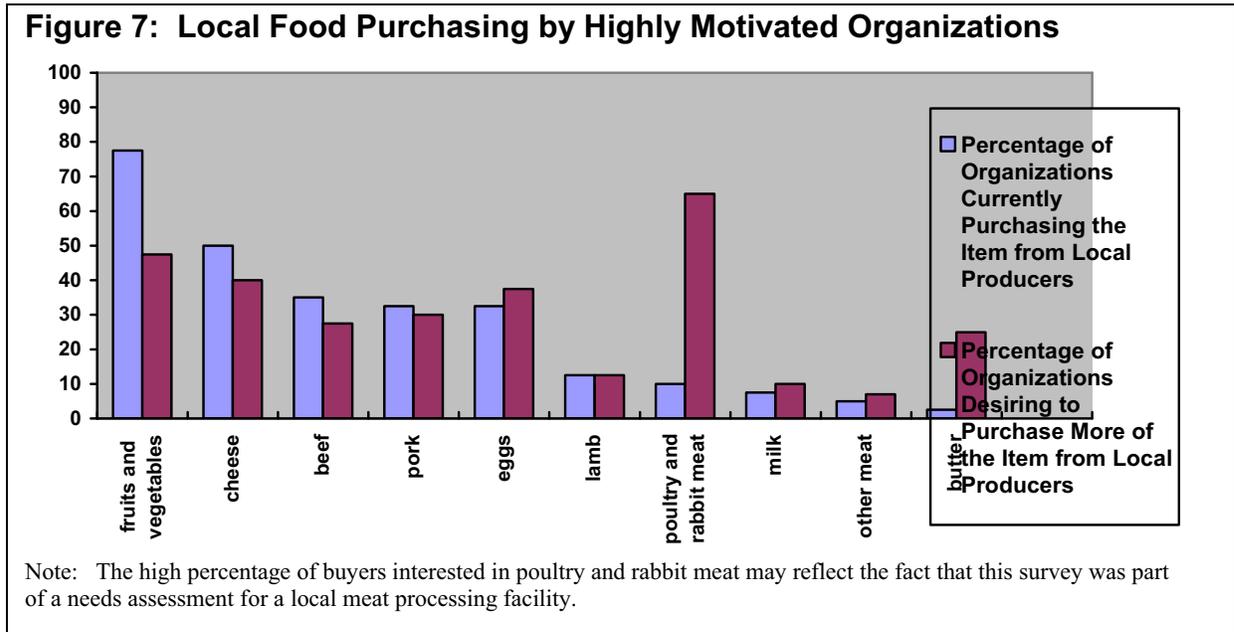
Consumers with high interest in local food reported buying fresh produce from local producers more than any other type of food, followed by eggs and then cheese. Of 87 consumers completing the online survey:

- 91% buy vegetables direct from local producers;
- 82% buy fruit direct from local producers;
- 63% buy eggs direct from local producers; and
- 47% buy cheese direct from local producers.

Most of the foods these consumers want but are not purchasing from local producers require some level of processing – including several types of meat, milk, yogurt, and butter. The lack of local processing options for regional producers appears to be at least one contributor to the gap between supply and demand for highly motivated consumers.

Organizational Buyers

Like consumers, organizational buyers reported higher rates of purchasing local produce than all other categories of food. For this group of buyers the gap is represented by businesses and organizations reporting that they would like to buy *more* of a particular product than they are currently buying (see Figure 7).



For each category of food named on the survey there were at least some organizations that reported they would like to purchase more of it from local producers. Even for foods like fruits and vegetables – which are able to move from farm to market pretty well in the region – there was significant unmet local demand reported by these buyers. These data suggest that there are other issues beyond the need for greater local processing that prevent the supply of local food from reaching organizational buyers.

Chapter 2: Barriers

Several sources of information were used to develop a list of barriers contributing to the gap between supply and demand of locally-grown food:

- **A mail survey of North Carolina Cooperative Extension (NCCE) agents in each of the 23 counties of WNC.** In addition to questions regarding county production, farmer attitudes and plans and collaboration between ASAP and NCCE, survey respondents were asked to describe issues affecting farmers in their counties and name barriers and strengths regarding the local food system. Responses from agents representing 22 counties were received for a response rate of 96%.
- **A phone survey of 22 organizations throughout the Southern Appalachian region for whom strengthening the local food system is a top priority.** These

individuals are referred to as local food advocates. The goals of this survey were to identify existing and emerging buy local food campaigns in the Southern Appalachian region; to explore interest among like-minded regional organizations in forming a learning community to share ideas and information; and to identify barriers and opportunities related to rebuilding strong local food systems in the region.

- **Surveys in various formats from businesses and institutions that serve or sell food in WNC.** As part of the market research described in Section 2, respondents were given a list of presumed barriers to buying local food and asked to rate the barriers on a scale from 1 to 10. The barriers on the list included: Coordinating purchase and delivery; finding growers and an adequate supply of local food; product quality; product price; food safety concerns; need for standard packaging; contracts or company policies; and the need for processed rather than fresh fruits and vegetables. Ratings from a total of 137 organizations (restaurants, schools, camps, hospitals, retailers, wholesalers) are included in this analysis.
- **Two consumer surveys.** One was a phone survey of 300 randomly selected consumers in Buncombe, Madison and Henderson counties and the other involved 694 customer interviews and another 732 rapid-response “dot surveys” conducted at tailgate markets in Buncombe and Madison counties. Both are described in detail in Section 2.
- **Surveys from two groups of producers.** This includes responses from 109 nursery growers (23% of total) and 29 dairy farmers (43% of total) which were collected to help answer specific questions that emerged during the research process.

Information from all of those sources has been analyzed separately with results and conclusions described in Appendix A. Here, the information is grouped together with nine separate barriers to advancing the local food system listed and described. The barriers, discussed in detail below, involve:

- Public Education and Awareness
- Infrastructure
- Land and Development Pressures
- Climate Conditions
- Price
- Local Food Distribution
- Training, Education, and Support for Farmers
- Farmer Attitudes and Plans
- Labor

Public Education and Awareness

While strong local markets and strong demand for locally-grown foods were named as assets for the region’s farm sector by many survey respondents, others cited the need for additional public education and promotional work. For local food advocates, the emphasis was on helping consumers know where to find local food and how to differentiate it from non-local food. This is an issue of product identification; one that essentially means there needs to be better labeling of local food in the marketplace. NCCE agents focused on the fact that many

of the region's residents are still not aware of benefits associated with buying locally-grown food.

The two consumer surveys identified access issues – including convenience and other issues related to the availability of local food – as top reasons consumers gave for not buying locally-grown food. To the extent that this involves knowing where to find local food, it may represent an issue of education and awareness. To the extent that it reflects difficulty local farmers have in getting farm products into local markets, however, it may also represent a problem with local food distribution or infrastructure.

Local Food Distribution

Across all categories of large-scale buyers surveyed, the two top-rated barriers regarding local purchasing were:

- *Coordinating purchase and delivery;* and
- *Finding growers with an adequate supply of local products.*

Both issues are closely related to the distribution system for food, which has changed dramatically in recent decades due to concentration in the ownership and management of food production. More than half of local food advocates and several NCCCE agents described the structure of the dominant food system as a barrier to advancing the local food system in the region.

The global food system, dominated by smaller and smaller numbers of companies and farms, poses serious challenges to small and mid-size producers. Larger packers, wholesale distributors, and retailers do not see viable opportunities in working with smaller food producers who cannot meet supply volumes or post-harvest handling requirements or lack the technology needed to produce case-ready products for retail.¹²³ Moreover, vertically integrated supply systems shut out smaller farmers and smaller scale food businesses. The challenge is to find ways to work within or around the mainstream food distribution system so that local food can reach interested buyers without substantial additional costs.

Infrastructure

Infrastructure is an all-encompassing term used to describe everything involved in moving food from farm to market. Infrastructure is sometimes used to describe physical things – trucks, cooling, processing, and packing facilities, for example – and sometimes used to describe less tangible elements of the food system, such as training, education, and support for farmers (see below). Infrastructure was one of the categories most often named by local food advocates as a barrier to advancing local food systems in the region.

¹²³ Eastwood, D., J. Brooker, C. Hall, E. Estes, T. Woods, J. Epperson, and F. Stegelin. *A Marketing Systems Approach to Removing Distribution Barriers Confronting Small-Volume Fruit and Vegetable Growers*. 2004. University of Georgia.

With its focus on supplying locally-grown food to local markets, Section 3 made it clear that there is a set of infrastructure requirements specific to each type of food. When NCCE agents were asked to choose from a list what type of infrastructure was most needed in their counties, refrigerated storage was chosen most often, followed by processing facilities, local distributors, farmer cooperatives, and then markets or places for farmers to sell their products locally.

To the extent that the physical types of infrastructure can involve considerable outlays of capital, attention will need to be given to cost-benefit analyses. Several local food advocates named financial constraints and a shortage of resources as barriers to advancing the local food system. Without careful planning, limited resources can quickly be used up on infrastructure that may not achieve desired results.

Training, Education and Support for Farmers

Both NCCE agents and local food advocates agreed that farmers in the region need additional training, education, and support regarding accessing local markets. They acknowledged that growing for local markets is in many ways different from growing for commodity markets. According to survey respondents, grower education and training in this context has several components. One involves the need for skills or assistance regarding marketing farm products locally. A second involves the need for technical support and information regarding growing new crops or using sustainable growing practices, which are generally more important in local markets. A third area deals with information. According to survey respondents, farmers need information about how to communicate with large-scale buyers, about packaging requirements, quality standards and delivery parameters. They need information specific to each type of local market (i.e., restaurant, retail, institutional).

Land and Development Pressures

Every single NCCE agent completing a survey named issues related to increasing land values as one of the top issues affecting the future of farming in the region. The challenge is linked to the tax burden associated with rising land values and pressure for farmers to sell their land to developers.

Farmer Attitudes and Plans

Related to financial pressures, farmer attitudes and plans are of prime importance in any effort to expand the local food system. Issues include how long the region's farmers and subsequent generations in farming families can be expected to continue farming; whether or not farmers are interested in shifting to new crops or selling to local markets; and to what extent replacement farmers are emerging in the region as other farmers retire or leave farming. Absent a set of answers to these questions direct from farmers, NCCE agents were asked to make predictions about farmer attitudes and plans based on their work in the field, interacting directly with farmers on a regular basis. In some counties agents estimated that as many as 45% of farmers would exit farming over the next five years, though the average rate of exit predicted was around 16%.

Recognizing that new farmers are replacing some that retire each year, agents representing half of the counties reported that the farm population in their counties would probably stay the same. Lifestyle farmers – which refers to people that choose to go into farming because they like the lifestyle it affords – were rated as the top category of replacement farmers, followed by retirees, then organic farmers, next-generation farmers, and finally Latino farmers. Extension agents named several barriers to next-generation farmers becoming primary farm operators, including a lack of interest in farming and the challenge of farming profitably in a global farm economy.

As farmers retire or farms change ownership, there is a need for transition planning or similar support structures to facilitate those processes. According to a 2005 survey conducted by the North Carolina Farm Transition Network (NCFTN), a relatively small proportion of NC farmers have committed to any retirement or estate planning or made plans about passing their farms on to a successor.¹²⁴

Climate Conditions

While only a few NCCE agents and local food advocates named seasonality as a barrier to a strong local food system, this issue was at the forefront of potential buyers' reasons for not buying more locally-grown food. Almost half of organizational buyers surveyed gave a high rating to the barrier "Finding growers or a local product supply." In commenting on the survey, some buyers explained that a significant part of the problem relates to seasonality and the fact that they cannot count on a steady, consistent supply of the products they need from local growers.

The seasonality of production is a barrier that will always be present in the region, though its influence can be minimized through various demand, supply and infrastructure interventions. On the production side, for example, season extension techniques include the use of hoop houses and similar greenhouse structures or successive planting techniques which effectively extend the growing season for certain crops. WNC's mountainous terrain also offers the opportunity for extended seasonal production because crops can be in different "seasons" within the region depending on the altitude of the farm.

On the consumption side, consumers may be encouraged to eat a more seasonal diet, in which products like tomatoes and sweet corn are consumed more often in summer months and root vegetables and greens are consumed more often in winter months. As processing becomes more accessible at the local level, consumers could also be encouraged to purchase more meat, dairy and processed produce from local producers during non-harvest months.

Labor

According to NCCE agents, the main way that labor represents a challenge for the local food system is that it is difficult for farmers to find local farm help. A recent estimate is that more than 8,000 migrant and seasonal farm workers work on WNC farms during the harvest

¹²⁴ See Appendix D for a brief description of the NCFTN's research.

season, pruning and cutting Christmas trees and hand picking apples, strawberries, cucumbers and other fruits and vegetables.¹²⁵ The large number of workers required to harvest the region's crops means that labor is one of the most important issues involved in expanding the local food system in the region.

According to the Institute for Southern Studies, approximately 10% of migrant and seasonal farm workers in North Carolina are participants in the H2A Agricultural Worker Program, a federal program designed to help meet the need for temporary labor during harvest times. The program provides for non-residents to legally work in the U.S. for four to six months each year. Farm workers not participating in the H2A program could be *migrant workers*, who move from place to place based on harvest requirements and are located in WNC only during peak harvest times, or *seasonal workers*, who live in the region but typically work non-agricultural jobs at other times of the year. Because most farm workers in WNC are Latinos, challenges are often present for farmers in the form of language and cultural barriers.

In order to explore labor issues as perceived by farm workers, input was solicited from the region's Latino Centers, mostly grassroots organizations staffed by or working closely with members of the Latino community.¹²⁶ Phone interviews were conducted with staff from seven Latino centers in the region. According to survey respondents, family and personal issues are as important as working conditions in terms of challenges facing farmworkers in the region. Family and personal issues include housing, medical care, education, language, and documentation status. Among work-related challenges, more than half of all comments by survey respondents focused on safety, mostly concerning pesticide exposure and related safety equipment and information. Other issues not named by survey respondents but understood to be challenges facing Latino farm workers in this region include racism, low wages, limited options for jobs when the growing season ends, the lack of legal protections and other problems related to the fact that farm workers are excluded from minimum wage laws and some Occupational Safety and Health Administration (OSHA) regulations covering other types of workers.¹²⁷

Price

Price was one of the top two barriers to buying local food named by both groups of consumers surveyed. Both surveys also showed that consumers were willing to pay more for locally-grown food. The issue of price is obviously a complicated one. Challenges related to pricing in a local food system are heavily connected to distribution and infrastructure issues described elsewhere. By their nature, large consolidated markets suppress food prices by seeking to produce larger quantities of uniform products at the lowest price possible.

¹²⁵ Larson, A. *Migrant and Seasonal Farmworker Enumeration Profiles Study: North Carolina*. 2000. Migrant Health Program, Bureau of Primary Health Care: Health Resources and Services Administration.

¹²⁶ *Exploring the Role of Latinos in the WNC Food and Farm Economy*. 2007. Appalachian Sustainable Agriculture Project: Asheville, NC. (Appendix A)

¹²⁷ Personal interview, Molly Hemstreet with the Center for Participatory Change.

Interventions in the food procurement and distribution systems may make it possible for farmers to achieve higher returns without affecting prices paid by consumers. Nevertheless, price is also an issue of education and awareness. Raising awareness among consumers about the cost of producing and distributing food in the local compared to the global food system is one way to counter the influence of price as a barrier to a strong regionally-based food system.

Other barriers

One major limitation of this study is the absence of information *directly from farmers* regarding barriers involved in selling to local markets. Some effort was made to assess farmer attitudes and perceptions through NC Cooperative Extension agents and limited producer data was gathered from nursery growers and dairy farmers. More comprehensive surveying of producers was determined to be impractical given the time and resource constraints of the research team. It is possible that one or more key barriers specific to producers' interest and/or ability to sell to local markets is omitted from the list of barriers reviewed in this chapter. Other regional research suggests, for example, that difficulty obtaining credit is a major challenge faced by farmers interested in establishing new enterprises.¹²⁸

¹²⁸ *Funding the Harvest*. 2004. Self-help Credit Union (Durham, NC) and Rural Advancement Foundation International – USA (Pittsboro, NC).

SECTION 5: Bridging the Gap between Demand and Supply

The gap refers to the fact that there is more demand than supply for many types of food produced in the region and that many consumers, businesses, and organizations indicate they want more locally-grown food than they currently can buy. Supply is understood to include more than just production. It includes issues related to the food procurement and distribution system, issues involving equipment, facilities, and processes for moving food from farm to market. This section draws on research and information presented throughout the report to generate recommendations and make conclusions about bridging the gap between demand and supply of locally-grown food in WNC.

The recommendations reflect an underlying assumption that the local food system will change incrementally over many years and that aiming for its maximum potential will require a long-term perspective. The most urgent area for action now may be related to building the supply of locally-grown food – again defined to encompass production plus other issues involved in moving food from farm to market. Yet demand-focused interventions are also important, particularly as local farm products become more available and accessible to the region’s consumers. Addressing supply issues without simultaneously addressing demand issues would be short-sighted. In that context, recommendations 1 through 6 are supply-focused interventions and recommendations 7 through 9 are oriented towards expanding demand. The last two recommendations are more general and discuss the need for better collaboration and future research by regional groups concerned with food and farming issues.

The recommendations also include points of action. Following an explanation of each recommendation is a statement of who or what group is expected to act on it. Among the intended actors are public policymakers, large scale buyers, and local food supporters – broadly defined to include ASAP and other nonprofit, academic, public and private organizations concerned with strengthening the region’s food and farm sector.

Chapter 1. Recommendations

1. Improve outreach efforts for larger scale markets

Outreach and promotional efforts to businesses and organizations have been successful, with significant increases in the number of restaurants, food stores, and other businesses joining ASAP’s Local Food Campaign over five years. The *Local Food Guide* provides information to consumers about where to find locally-grown food in the region, but similar publications are needed to show larger-scale buyers where to find locally-grown food and how to make local purchasing work. *The Mixing Bowl*, introduced by ASAP in 2006 as an online and print publication linking restaurants and producers, is an example of how ASAP has begun to address this challenge.

Similar publications are needed for other categories of large scale buyers, such as hospitals, summer camps, school and colleges. Drawing on research-based barriers specific to each group of buyers, it may be appropriate to develop outreach materials including practical steps

and models of success from other regions that could be replicated. This is essentially a supply-side intervention since improving the ability of large scale buyers to satisfy their desire for local food and farm products is a way to make those products more available to consumers.

2. Improve labeling of local food

The research confirms the need for better or more expanded labeling of local foods in the marketplace. Labeling is important both because it allows consumers to act on their preference for locally-grown food and it allows any price premiums associated with the food being locally-grown to accrue to producers. In the Asheville area, 82% of consumers surveyed indicated that they would buy more local food if it were labeled as local, and 77% of survey respondents agreed with the statement “When locally produced foods cost a little more, they are worth the extra cost.”¹²⁹ With ASAP having launched the *Appalachian Grown*TM labeling initiative in 2006, there is tremendous opportunity for expanding that program and improving it. Wider recognition of the label is needed to ensure its value for producers.

3. Provide information and support to growers

Farmers will need assistance and information regarding strategies for selling to local markets. For direct markets, basic business management and marketing skills are important. For larger scale markets, information on packaging and labeling requirements as well as how producers can address buyers’ food safety concerns are critical to success. Farmers need specific information about what markets are available to them and how to access them. Growers may also need information about shifting to fruit and vegetable production and instruction on how to use more sustainable production methods, which are increasingly important in local markets. For large and small scale markets alike, farmers need basic skills like business planning, promotion, and marketing in order to be successful in local markets.

4. Advocate for policies that favor local food distribution and sale

Processing requirements for meat and dairy products vary considerably from state to state, which means that changing North Carolina requirements to favor local food systems is a realistic goal. By working with policymakers at both state and local levels, local food advocates can not only pursue changes in policies affecting producers in the region, but keep agriculture issues at the forefront of the many regional planning and promotion efforts. Policy advocacy is also important as it relates to expanding the reach of local markets into low-income market segments. Accepting food stamps, for example, can be logistically problematic for markets that traditionally operate on a cash economy. Some other regions have used Food Policy Councils as structures for organizing policy advocacy efforts, though the efficacy of this approach is uncertain (see report in Appendix A).

¹²⁹ *Locally Grown Food Strategic Positioning Research*. 2004. Research Inc: Atlanta, GA. (Appendix A)

5. Help maintain working farmland in the region

Based on a combination of issues such as the advancing age of farmers, high development pressure and unmet demand for local food and farm products, there is a need for programs and policies to help maintain working farmland in the region. This can be accomplished through initiatives such as farmer transition programs, farmland preservation activities and other strategies affecting land use. Unrelated to land use but still closely related to the ability of the region's farms to continue and/or expand food production are programs and policies affecting seasonal farm labor. With many individual farm support agencies already working on these issues, this recommendation is as much about achieving a high level of coordination and collaboration among existing agencies as it is about developing any new action steps.

6. Identify points of intervention in food distribution and infrastructure systems

Infrastructure interventions include mostly practical steps designed to make it easier for local producers to sell their goods to local markets. They can involve adapting existing components of the food distribution system to accommodate local or establishing new facilities for local processing in the region. Based on a thorough review of food procurement and distribution systems in the region, interventions with good potential include:¹³⁰

- Backhauling – a practice where self-distributing retailers pick up produce from farmers on return trips to a centralized warehouse for further distribution to individual store locations;
- Pooling of production – through farmer cooperatives or through locally-based packing houses and distributors who collectively handle items from multiple producers;
- Developing the capacity of the Western North Carolina Farmers' Market;
- Expanding local food distribution through direct marketing channels; and
- Building regional processing capabilities.

7. Expand public education and awareness about local food

Strong demand for locally-grown food and farm products confirms that what ASAP and others have been doing to build public awareness and support for local food is working. In that sense, the research represents a mandate to continue those activities. In particular, the media messages, the promotional efforts, the general public education and outreach should be continued. It may be appropriate to add new messages to the public education campaign to counter identified barriers. Examples include information about how to eat a more seasonal diet or how to recognize local food in the marketplace. Consumers could also be encouraged to make preferences for processed local farm products as processing infrastructure becomes more available to local producers. In responding to price as a substantial barrier in consumer markets it may be useful to expand consumer education on more general topics such as how the food system works and how that system influences food prices and farmer incomes.

¹³⁰ *The Infrastructure of Food Procurement and Distribution: Implications for Farmers in Western North Carolina*. 2007. Appalachian Sustainable Agriculture Project: Asheville, NC. (Appendix A)

8. Expand the Local Food Campaign more fully throughout the region

Historically, Campaign activities have been concentrated in Asheville and surrounding counties based on its position as the hub of economic activity and population density in the region. Nevertheless, there are many more farms in outlying areas. Expanding opportunities for farmers in the region to sell their goods locally could mean opening new tailgate markets in counties where there are few. It could also involve expanding the Mountain Tailgate Marketing Association (MTMA) or establishing similar organizations throughout the region. As far as consumer outreach is concerned, different methods for reaching rural communities may be necessary.

9. Integrate efforts to promote agriculture with efforts to promote tourism

Tourism and agriculture are two of the largest industries in the region that – except in the case of on-farm agritourism – operate more or less independent of each other. This is despite the fact that farms occupy one-third of the privately-owned land in WNC and are therefore a key part of the region's scenic landscape. There are opportunities for both industries to benefit from working together to promote food and farm tourism in the region. A framework for this type of collaboration exists in the region's designation as a national heritage area. Established by Congress in 2003, the Blue Ridge National Heritage Area includes agriculture as one of five focus areas.

There may also be a need for expanded or different tailgate market promotion among tourists. There is evidence that tourists are interested in the experience of shopping at farmer's markets. The WNC Farmers' Market is one of the top tourist destinations in the region. Yet tourists currently represent a very small percentage of tailgate market shoppers.

The Asheville City Market, scheduled to open in Spring of 2008, is expected to be a destination point for locals and visitors and represents at least one step towards expanding tailgate market sales among tourists. Increasing the variety and quantity of processed farm products for direct sale is another way to include tourists in the Local Food Campaign.

10. Expand direct market channels

The potential for expanded sales through farmers markets lies in increasing the number and location of markets in addition to continuing the market promotional activities that have been so effective. Expanding tailgate market sales also means offering training, workshops and other resource materials for farmers interested in selling at the markets. Community Supported Agriculture programs also hold good potential for expansion in the region.

11. Strengthen partnerships among regional organizations

No one organization can do all of this work alone. New partnerships need to be formed, relationships expanded, and roles clarified in order to move towards a network of successful local food systems within the region. The agenda is large and broad, probably more than any one organization can handle effectively.

From the survey of organizations working to expand the local food system in the Southern Appalachian region, every single one said they would like to be part of a group working to share best practices and lessons learned. Among NCCE agents surveyed, more than half of the agents gave suggestions for how NCCE and ASAP could work together more effectively on issues related to regional producers' ability to sell farm products to local markets. Clearly there is strong momentum for collaboration and cooperation in the region.

Outside of agriculture, there are other groups where partnerships are critical for advancing the local food agenda. By working with farmworker support agencies, for example, ASAP and others involved in local food issues can help ensure the long-term success of the industry. Partnerships with food security organizations can help accomplish some of the basic objectives of local food organizations – to ensure a consistent supply of fresh, nutritious food to all the region's residents, for example. Finally, partnerships with governmental organizations can facilitate the policy advocacy process and help local food advocates realize some successes in shaping legislation to promote and expand local sales of local farm products.

12. Conduct additional research in identified areas

As is always the case with a research project of this magnitude, there are areas where additional research is needed. The research needed to advance the local food system includes examining efforts by groups in other regions to expand their local food systems. There is a lot to learn from those groups about food purchasing preferences and priorities for different types of buyers. There are examples of effective educational messages and models of success for incorporating local food into hospitals or schools, for example.

There are also some research tasks uncovered from this research which are particular to this region. For example, the report suggests it could be useful to more fully explore the potential of local markets for nursery crops; to examine the role of processing in expanding the local food system; to clarify the extent to which development pressures threaten the region's farmland; and to explore the full effects of the tobacco buyout on regional farmers. University-based research investigating additional options for season extension in the region might also be useful.

Finally, research evaluating the effectiveness of local food system interventions is needed. Documenting the success of programs and activities can significantly influence future funding streams and help determine the most appropriate use of resources.

Chapter 2. Conclusions

This collection of surveys, government statistics and other research provides a baseline of information about the Western North Carolina food and farm economy. The report also calculates potential spending on local food at future intervals and in so doing quantifies the vision for a strong local food system. It can be a valuable tool for planning and monitoring change over time.

What is evident from the research is that there are areas where ASAP's Local Food Campaign is working well and should be continued and there are other areas where expansion of the Campaign is appropriate. There are also opportunities to broaden the agenda and begin new work. Partly this reflects the fact that as the local food system in the region has moved well beyond direct markets, new issues and challenges have emerged.

In large measure, those new challenges involve the area between demand and supply, which has been generally termed "infrastructure." Beyond physical types of infrastructure there are opportunities to expand local markets for local farm products by altering food distribution systems and identifying ways that local producers can tap into existing supply chains for retailers and other foodservice establishments in the region. Even as infrastructure improvements are being made and efforts to increase demand are continued, it is appropriate to consider building the supply of fruits, vegetables, and other foods for sale to local markets.

While a strong local food system has potential health, environmental and other benefits for the region's residents, it is fundamentally a way to sustain and strengthen farms and farming. The farm sector is a substantial contributor to the region's overall economy and a significant driver of tourism through its contribution to the region's natural beauty and scenic landscape. A strong local food system, then, is a powerful economic development tool with the potential to make the region a better place to live and work.

APPENDIX A: Research

The report *Growing Local: Expanding the Western North Carolina Food and Farm Economy* is based on analysis of primary and secondary data as well as results from a series of surveys commissioned by ASAP and carried out between 2000 and 2006. Data from each survey are analyzed independently, with major findings subsequently integrated and used as the basis for this report. A total of twenty distinct *Research Reports* are included in this Appendix following a brief description of the survey methodology in Table 18 below.

Table 18: Research Reports		
Title	Pages	Methodology
<i>Locally-grown Foods Strategic Positioning Research</i>	5A – 55A	A phone survey to 300 randomly selected consumers in Buncombe, Madison and Henderson counties conducted in 2000 and repeated in 2004 with slight modifications to some questions. Surveys were completed with consumers over 18 years of age who reported that they do the majority of grocery shopping for their households.
<i>Western North Carolina Food and Farm Economy: Highlights of a Data Compilation</i>	57A – 64A	This compilation includes selected data items from the USDA Census of Agriculture for the 23 counties of western North Carolina, as well as information showing estimated fruit and vegetable consumption in the region.
<i>A Market Analysis of Tailgate Farmers' Markets of Buncombe and Madison Counties</i>	65A – 87A	Face-to-face interviews were conducted with 694 shoppers at six tailgate markets in the summers of 2003 and 2004. An additional 732 rapid-response “dot surveys” were completed in 2003, in which shoppers were asked to indicate their answers to 5 questions by placing a dot on a poster listing possible answers to the questions. Customer counts were also conducted to determine an estimate of the number of shoppers present at the markets on the days of data collection.
<i>Results from a Survey of Farmers' Tailgate Market Vendors in Buncombe and Madison Counties</i>	89A – 95A	Written questionnaires were completed anonymously by 61 vendors representing eight tailgate markets in Buncombe and Madison Counties during the summer of 2003.
<i>Community Supported Agriculture in the French Broad River Basin</i>	97A – 101A	In 2004, an email questionnaire was sent to 17 CSA farms listed in ASAP's Local Food Guide that year. 12 farms completed the survey, for a response rate of 71%.
<i>Results from a WNC Farm-to-College Survey</i>	103A – 107A	Phone interviews were completed with Foodservice Directors at 15 of 17 (88%) colleges and universities in western North Carolina. The interviews were completed during the 2004-2005 and 2005-2006 academic years.

<i>Summer Camps as a Potential Market Channel for Locally-grown Food in Western North Carolina</i>	109A – 112A	An online survey was distributed to 49 summer camps in WNC in the Spring of 2006. Representatives from 23 camps completed the survey for a response rate of 47%.
<i>Defining Success in the Farm-to-School Arena</i>	113A – 118A	In-depth interviews were conducted with Child Nutrition Directors in five public school districts in WNC in January of 2006. A written questionnaire was mailed to the remaining 19 Child Nutrition Directors representing public school districts in the region. Interview and/or questionnaire data was collected from 19 (79%) of the districts.
<i>Restaurants as a Market Channel for Locally-grown Food in Western North Carolina</i>	119A – 122A	This report uses data from the 2002 US Economic Census to project the potential for locally-grown food purchases by full-service restaurants in WNC.
<i>Local Food Purchasing by Highly Motivated Businesses and Consumers in Western North Carolina</i>	123A – 128A	This report presents data from two surveys: 1) In response to a link posted on ASAP’s website, an online survey of consumers with high interest in local food was completed by 87 consumers over a three week period during the fall of 2006. 2) A written questionnaire was mailed to 102 organizations with established high interest in buying locally-grown food in the fall of 2006. A total of 40 were completed for a response rate of 39%.
<i>A Survey of Licensed Dairies in Western North Carolina</i>	129A – 132A	A written questionnaire was mailed to 68 dairy farms in WNC during the fall of 2006. A total of 27 questionnaires were returned, for a response rate of 40%.
<i>The Value of Appalachian Grown™ labeling for Nursery Growers in Western North Carolina</i>	133A – 137A	A written questionnaire was mailed to 469 nursery growers (not including Christmas tree growers) in WNC during the summer of 2006. A total of 109 surveys were returned, for a response rate of 23%.
<i>A Survey of Local Food Activities in the Southern Appalachian Region</i>	139A – 153A	Phase I of this research, completed during 2004, involved an email survey of Agricultural Extension agents and selected non-profit organizations in 100 counties of Southern Appalachia. The purpose of this initial survey was to gather information about local food campaigns and activities in the region. Seventeen responses naming dozens of organizations were received. Phase II of the research involved in-depth interviews of 22 Program Directors of non-profit and academic groups working on local food system issues in the Southern Appalachian region. The in-depth interviews were conducted during 2006.

<i>Hospital Foodservice in Western North Carolina: Implications for the Local Food System</i>	155A – 158A	A phone survey of 27 hospitals in WNC was conducted during the fall of 2006. A total of 15 interviews were completed, for a response rate of 56%.
<i>A Survey of NC Cooperative Extension Agents in Western North Carolina</i>	159A – 164A	During the fall of 2006 a written questionnaire was mailed to NC Cooperative Extension agents representing each of the 23 counties of WNC plus the Cherokee Indian Reservation. A total of 22 surveys were completed, for a response rate of 92%.
<i>A Survey of Shoppers at the WNC Farmers' Market</i>	165A – 170A	Face-to-face interviews were conducted with 75 shoppers at the WNC Farmers Market during the summer of 2006.
<i>Opportunities for Expanding Food and Farm Tourism in Western North Carolina</i>	171A – 177A	An email message with a link to an online survey was sent to 30 tourism agencies representing the 23 counties of western North Carolina in the summer of 2006. Follow-up consisted of phone and email reminder messages. A total of 11 agencies completed the survey for a response rate of 37%.
<i>Exploring the Role of Latinos in the Western North Carolina Food System</i>	179A – 184A	Latino Centers in WNC were contacted by phone and email and asked a series of questions about Latino farmers, farmworkers, restaurant owners and tiendas in their communities. A total of seven organizations contributed information to this survey.
<i>The Infrastructure of Food Procurement and Distribution: Implications for Western North Carolina Farmers</i>	185A – 202A	This report examines the food industry in the U.S. and its implications for farmers in WNC who want to grow for and sell to local markets. Local patterns of distribution are presented as models with an emphasis on their potential to accommodate more local food with further development. Data on local systems are drawn from participant observation; from formal and informal interviews with local producers, processors, and wholesalers; and from local news outlets.
<i>Food Policy Councils: What and Why?</i>	203A – 206A	This paper reviews the work of Food Policy Councils in the US.

**LOCALLY-GROWN FOODS
STRATEGIC POSITIONING RESEARCH**

December 2004

Prepared for:

The Appalachian Sustainable Agricultural Project

729 Haywood Rd., Suite 3
Asheville, NC 28806

Research Inc.
3050 Royal Blvd. South, Ste. 115
Alpharetta, GA 30022
770-619-9837

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INTRODUCTION

In 2000, the Appalachian Sustainable Agriculture Project (ASAP) initiated a campaign to encourage North Carolinians to buy locally-grown food. Prior to commencing the campaign, ASAP engaged a research study to....

- λ Identify Western North Carolinians usage patterns when shopping for food, which includes meat, fruit, vegetables, dairy products, and poultry.

- λ Define priorities when purchasing these food items.

- λ Measure perceptions of places that sell locally home grown foods.

- λ Determine which of several messages is most likely to motivate consumers to purchase locally-grown food.

In 2004, ASAP would like to measure changes in consumer behavior since the inception of the campaign as well as measure recall of locally-grown food advertising and marketing efforts. This document presents the findings from the 2004 quantitative research study. Findings will be compared with those from the 2000 study.

METHODOLOGY

WHO	Consumers responsible for doing most of the grocery shopping for their household. Respondents were at least 18 years of age.
WHAT	Telephone interviews. Each interview required from 10 to 12 minutes of a respondent's time.
WHEN	Respondents were interviewed during November 2004. In 2000, respondents were interviewed in April and May.
WHERE	Buncombe, Madison and Henderson Counties, North Carolina.
WEIGHTING	Findings were weighted according to the population in each county. <ul style="list-style-type: none">- Buncombe (66%)- Henderson (38%)- Madison (6%)
HOW	<p>Research Inc. was responsible for research design, fieldwork, report preparation and presentation. Representatives of ASAP had the opportunity to approve the draft and the anticipated research methodology, suggesting any alterations they felt would enhance the quality of the research</p> <p>Once the draft was approved, the questionnaire was tested among actual respondents to ensure that wording and question sequence were appropriate and clearly understandable. After pre-testing was completed and the questionnaire had been revised, Research Inc. submitted the tested version of the questionnaire for final approval.</p> <p>All interviews were conducted from Research Inc.'s central research facility in Greenville, South Carolina. Interviewers were trained to ensure that they understood project specifics.</p> <p>Findings were analyzed by senior analysts at Research Inc.</p>

HIGHLIGHTS

HIGHLIGHTS

FOOD SHOPPING PATTERNS

- **Asheville area residents are spending a greater percentage of their monthly budget on locally-grown food in 2004 than in 2000.**
 - In 2000, 20% spent more than 10% of their monthly expenditure on locally-grown food, whereas 27% did so in 2004.
 - All ages and income levels show an increased propensity to allocate more money towards purchasing locally produced foods.

- **Their expenditure for food (fruits, vegetables, dairy products, meat and poultry) has risen markedly during the four year period.**
 - In 2000, 41% spent more than \$200 on food per month. In 2004, this figure increased significantly to 71%. Note that this increase occurred among all age groups.
 - Monthly food expenditures are higher for residents of Buncombe County than those living in Madison or Henderson Counties.

FOOD PRIORITIES

- **When shopping for food items such as fruit, vegetables, meat, poultry, and dairy, consumers' top priority is freshness.** Almost all (94%) Asheville area residents rated freshness a top priority (a "6" or "7" rating) in 2004. The second priority for consumers is nutritional value, followed by appearance.
 - Indeed, of those who buy locally produced food, 49%, say freshness is the primary reason they purchase locally produced foods. 19% say they purchase locally produced food because they are of better quality.
 - While freshness was the top priority in 2000 as well, consumers place greater importance on nutritional value, appearance, convenient location, and price in 2004 than they did in 2000.
 - Those who allocate more than 10% of their food expenditure per month on locally produced food place higher importance than other consumers on nutritional value. In 2000 they placed less importance than other consumers on nutritional value.

- **More than half (58%) Asheville area consumers do *not* feel that locally-grown food is an important consideration when choosing a restaurant or grocery store.**

HIGHLIGHTS

(CONTINUED)

FOOD VENUES

- **When asked to rate their overall satisfaction with six venues for five attributes, consumers' responses reveal that their satisfaction level with the venues has shifted since 2000.**
 - Notably, satisfaction for all venues which sell food declined for most attributes measured from 2000 to 2004. In particular, grocery stores experienced a marked decline in consumers' perception of freshness, nutritional value, and appearance of food items.
 - In 2004, farmers markets have the best image for three of the five attributes measured. Farmers markets enjoy the best image for:
 - Freshness (94% rated a "6" or "7" for this attribute)
 - Nutritional value (90%)
 - Appearance (73%)
 - Superstores like Sam's Club have the best image for price (65%), while grocery stores have the best image for convenience (72%).

PERCEPTIONS ABOUT LOCALLY-GROWN FOOD

- **Overall, consumers living in Buncombe, Henderson and Madison Counties appear to have a positive attitude towards locally-grown or produced food.** When asked how strongly they believe eight statements about locally-grown food, the majority of consumers indicated that the statements are *very* or *somewhat* believable in 2004. There were no significant changes in the believability of the statements since 2000, with one exception – consumers were significantly more likely to say they believe the statement, "*When you buy locally-grown food, you are helping to preserve the rural character of your region,*" in 2004 than in 2002.

- Contributes to the local economy (95% stated very or somewhat believable).
- Supports neighbors (93%).
- Preserves rural character (90%). (In 2000, only 79% believed this statement.)
- Tastes better (88%).
- Safer and healthier (81%).
- Improves health and personal well-being (76%).
- Makes statement about providing a better future for children (68%).
- Saves environment (65%).

HIGHLIGHTS (CONTINUED)

- **Positively, research findings reveal that all of the statements tested would motivate most consumers to purchase locally produced food.** However, consumers find these statements to be slightly less motivating than they were in 2000.
 - Consumers are most motivated to purchase locally-grown food by the statement, *“Buying locally produced food is a way to improve your personal health and individual well-being.”* 92% said the statement would make them more or somewhat more likely to buy locally produced foods.

- **Consumers were asked how strongly they agree or disagree with seven statements about the benefits of locally produced food versus food produced outside the local area.**
 - Similar to 2000, consumers are most likely to agree with the statement, *“Locally produced foods offer higher quality.”* 87% of consumers strongly agree or agree somewhat to the statement.
 - Consumers were least likely to agree with the statement *“I would buy more locally produced foods if they were packaged more attractively.”* In fact, consumers in all three counties are much less likely to agree with this statement this year than they were in 2000.

THE OPPORTUNITY

- **ASAP should continue to promote the freshness of locally produced food. The organization’s campaign should promote the positive effects of buying locally-grown food on the “consumer.”**
 - 32% of consumers say that high prices are the top reason they do not buy locally produced foods. This figure is up from 2000, when 18% said that price kept them from purchasing locally produced foods.
 - However, 77% of consumers strongly agree or agree somewhat with the statement, *“When locally produced foods cost a little more, they are worth the extra cost.”*
 - Also increasing from 2000 is consumers’ perception that locally produced foods are sold at inconvenient locations. 13% listed this as a reason for not buying locally produced foods in 2000, and 17% mentioned this in 2004.

HIGHLIGHTS (CONTINUED)

■ **Positively, over half of consumers (53%) have heard of or seen advertising promoting locally-grown food.**

- Of those who claim they have seen an advertisement, 30% saw it in a newspaper. 20% saw an advertisement on television, and 12% noticed bumper stickers.
- Nearly half (45%) say that seeing or hearing advertisements has increased their purchases of locally-grown food. Another 53% say the advertisements have not increased their purchases because they already purchase what they need.

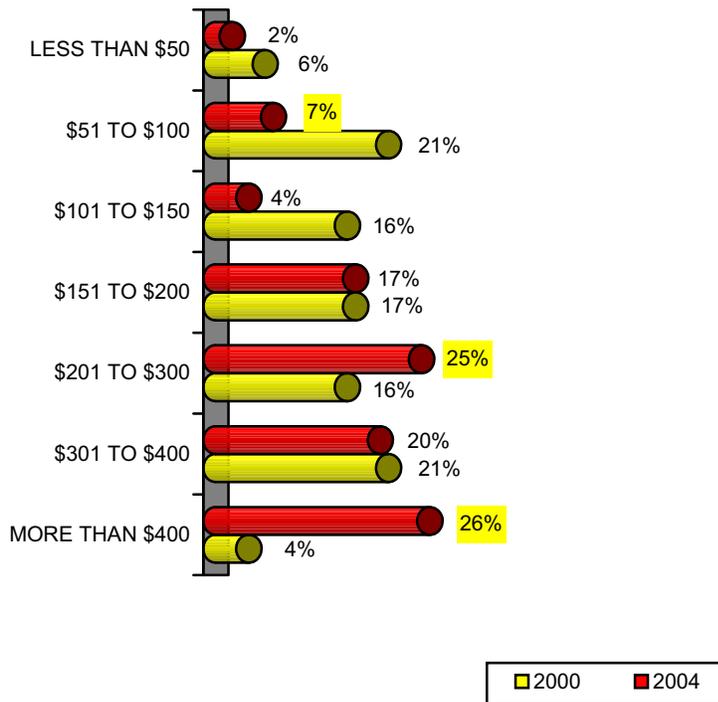
■ **ASAP has opportunity to improve awareness and usage of the publication, the *Local Food Guide*.**

- Most (87%) Asheville area residents are not aware of the *Local Food Guide*.
- Of those who have heard of the *Local Food Guide*, less than half (42%) use it to find local food or farms. Most (94%) have *not* used the web version of the *Local Food Guide*.

USAGE PATTERNS

MONTHLY FOOD EXPENDITURES¹

In 2004, the majority of Asheville residents (71%) spend more than \$200 per month on food. One-fourth (26%) of all consumers say they spend more than \$400 per month.



In 2004, the average monthly food expenditure is higher for Buncombe County residents than Madison or Henderson County residents.

	COUNTY							
			BUNCOMBE		MADISON		HENDERSON	
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (100) %	2004 (100) %	2000 (100) %	2004 (100) %	2000 (100) %	2004 (100) %
LESS THAN \$50	6	2	6	1	6	1	4	3
\$51 TO \$100	21	7	19	6	18	5	26	9
\$101 TO \$150	16	4	18	2	11	9	11	8
\$151 TO \$200	17	17	17	18	21	18	16	13
\$201 TO \$300	16	25	15	25	20	26	18	25
\$301 TO \$400	21	20	23	20	19	16	18	19
MORE THAN \$400	4	26	3	27	5	25	7	23

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

¹ "Generally, how much do you spend on food each month?"

MONTHLY FOOD EXPENDITURES² (CONTINUED)

In general, the older the consumer the less he or she spends on food items. However, food expenditure among consumers age 55 or older increased markedly from 2000 to 2004. In 2000, only 1% claimed they spent over \$400 per month on food, whereas in 2004 20% of consumers age 55 and older made that same claim.

	AGE							
			LESS THAN 35		35 TO 54		55 & OLDER	
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (38) %	2004 (58) %	2000 (85) %	2004 (149) %	2000 (152) %	2004 (75) %
LESS THAN \$50	6	2	5	2	4	7	7	4
\$51 TO \$100	21	7	13	2	12	6	26	13
\$101 TO \$150	16	4	5	5	11	5	17	11
\$151 TO \$200	17	17	29	14	14	16	17	20
\$201 TO \$300	16	25	18	36	15	23	18	20
\$301 TO \$400	21	20	24	21	33	20	13	12
MORE THAN \$400	4	26	5	21	12	29	1	20

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

Nearly four in ten (36%) consumers with household income of \$50,000 or more claim they spend \$400 or more on food items each month. In fact, consumers of all income levels are much more likely in 2004 to spend more than \$400 per month on food than they were in 2000.

	INCOME							
			UNDER \$25,000	UNDER \$25,000	\$25,000- \$49,999	\$25,000- \$49,999	\$50,000 & MORE	\$50,000 & MORE
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (72) %	2004 (35) %	2000 (93) %	2004 (63) %	2000 (32) %	2004 (87) %
LESS THAN \$50	6	2	10	-	1	2	3	1
\$51 TO \$100	21	7	28	23	19	3	3	2
\$101 TO \$150	16	4	18	14	14	5	6	5
\$151 TO \$200	17	17	17	20	20	19	16	9
\$201 TO \$300	16	25	14	14	17	30	28	24
\$301 TO \$400	21	20	14	14	23	16	38	23
MORE THAN \$400	4	26	-	14	5	25	6	36

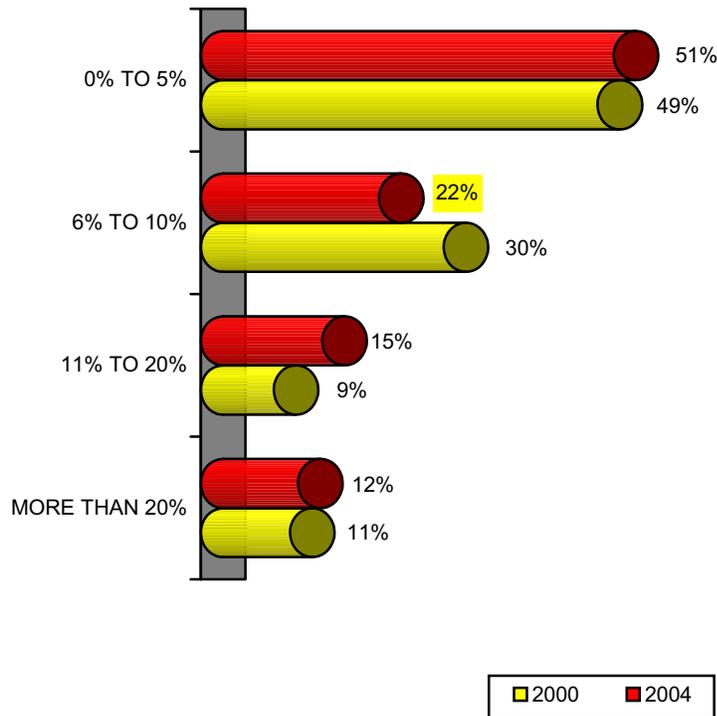
Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

² "Generally, how much do you spend on food each month?"

PERCENTAGE OF FOOD EXPENDITURE SPENT ON LOCALLY-GROWN FOOD³

Similar to 2000, half (51%) of all Asheville area consumers spend 5% or less of their food expenditure on locally-grown food in 2004.

However, among those who spend more than 5% on locally-grown food, their expenditures have increased. In 2000, 21% of all consumers spent more than 10% of their total food bill on locally-grown food. By 2004, 27% spent more than 10% on locally-grown food.



Among the three counties measured, Henderson County residents appear to spend the most on locally-grown foods. In 2004, Madison County experiences the greatest gain in expenditure on locally-grown food.

	COUNTY							
			BUNCOMBE		MADISON		HENDERSON	
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (100) %	2004 (100) %	2000 (100) %	2004 (100) %	2000 (100) %	2004 (100) %
0% TO 5%	49	51	45	49	64	54	55	56
6% TO 10%	30	22	32	24	21	25	29	17
11% TO 20%	9	15	11	17	10	8	6	12
MORE THAN 20%	11	12	12	10	5	13	10	15

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

³ "About what percent of your monthly food bill is spent on locally grown foods?"

**PERCENTAGE OF FOOD EXPENDITURE SPENT
ON LOCALLY-GROWN FOOD⁴**
(CONTINUED)

In 2004, consumers age 55 or older are twice as likely to spend more than 10% on locally-grown food than they were in 2000.

	AGE							
			LESS THAN 35		35 TO 54		55 & OLDER	
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (38) %	2004 (58) %	2000 (85) %	2004 (149) %	2000 (152) %	2004 (75) %
0% TO 5%	49	51	43	50	57	53	59	56
6% TO 10%	30	22	31	25	26	24	25	14
11% TO 20%	9	15	14	8	10	15	5	10
MORE THAN 20%	11	12	11	17	7	8	10	20

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

Expenditure on locally-grown food increases with income. Indeed, consumers with annual household income higher than \$50,000 are most likely to claim they allocate more than 10% of their food budget towards purchasing locally-grown food.

Interestingly, expenditure on locally-grown food among consumers with household income less than \$25,000 increased during the past four years.

	INCOME							
			UNDER \$25,000	UNDER \$25,000	\$25,000- \$49,999	\$25,000- \$49,999	\$50,000 & MORE	\$50,000 & MORE
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (72) %	2004 (35) %	2000 (93) %	2004 (63) %	2000 (32) %	2004 (87) %
0% TO 5%	49	51	64	37	50	64	56	42
6% TO 10%	30	22	17	33	36	15	28	26
11% TO 20%	9	15	9	7	8	9	12	20
MORE THAN 20%	11	12	9	22	7	13	4	12

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

⁴ "About what percent of your monthly food bill is spent on locally grown foods?"

FOOD SHOPPER PROFILE

The following two pages present a profile of Asheville area residents by the percentage of their monthly food bill spent on locally produced food in 2004.

PERCENTAGE OF MONTHLY FOOD BILL SPENT ON LOCALLY PRODUCED FOOD					
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	0% TO 5% (121) %	6% TO 10% (50) %	11%+ (57) %
FOOD EXPENDITURES					
LESS THAN \$50	6	2	3	-	2
\$51 TO \$100	21	7	9	4	9
\$101 TO \$150	16	4	4	2	6
\$151 TO \$200	17	17	21	14	11
\$201 TO \$300	16	25	26	22	26
\$301 TO \$400	21	20	19	24	19
MORE THAN \$400	4	26	18	33	28
AGE					
18 TO 34	13	20	20	24	21
35 TO 44	14	25	21	27	21
45 TO 54	17	26	32	33	26
55 TO 64	21	11	12	6	16
65 OR OLDER	35	18	14	10	16
INCOME					
LESS THAN \$14,999	11	7	8	6	10
\$15,000 TO \$24,999	24	9	5	20	10
\$25,000 TO \$34,999	28	10	22	3	10
\$35,000 TO \$49,999	21	17	26	20	19
\$50,000 TO \$75,000	N/A	30	23	31	33
\$75,001 TO \$100,000	N/A	18	12	11	17
MORE THAN \$100,000	N/A	8	4	9	2
EDUCATION					
NO HIGH SCHOOL DEGREE	3	5	10	4	5
HIGH SCHOOL GRAD	13	20	22	24	16
SOME COLLEGE	18	21	25	24	21
COLLEGE GRADUATE	22	37	34	31	32
POST GRADUATE WORK	6	16	8	10	23
SEX					
MALE	19	21	23	30	19
FEMALE	81	79	77	70	81

Blue indicates significant difference from total study at 95% confidence interval. Yellow indicates significant difference from previous year at the 95% confidence interval.

FOOD SHOPPER PROFILE

PERCENTAGE OF MONTHLY FOOD BILL SPENT ON LOCALLY PRODUCED FOOD					
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	0% TO 5% (121) %	6% TO 10% (50) %	11%+ (57) %
MAJORITY OF NEWS					
TELEVISION	70	51	61	57	33
NEWSPAPERS	23	31	23	31	39
RADIO	6	18	16	12	28
RACE					
WHITE	N/A	97	98	96	96
ASIAN AMERICAN	N/A	2	2	2	-
AFRICAN AMERICAN	N/A	1	-	2	-
HISPANIC	N/A	1	-	-	4
FAVORITE LOCAL RADIO STATION (TOP TEN)					
WNCW 88.7 FM	4	18	5	12	28
WKSF 99.9 FM	16	15	20	21	24
WCQS 88.1 FM	12	11	11	2	6
WWNC 570 AM	31	9	7	7	6
WMIT 106.9 FM	13	7	10	10	6
96.5 FM	-	6	7	12	6
WHKP	6	4	7	2	4
102.5 FM	-	4	5	5	-
WFBC 93.7	-	3	1	7	2
104.9 FM	-	2	1	-	4
NEWSPAPERS READ REGULARLY					
ASHEVILLE CITIZENS TIMES	72	62	53	60	51
HENDERSON TIMES NEWS	23	17	21	12	32
MOUNTAIN XPRESS	1	7	2	12	7
NEWS RECORD	0	3	8	8	9
USA TODAY	-	2	1	-	4
OTHER	3	2	4	4	4
DON'T KNOW	-	19	19	20	19

Blue shading indicates a significant difference from total study at the 95% confidence interval.
 Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.



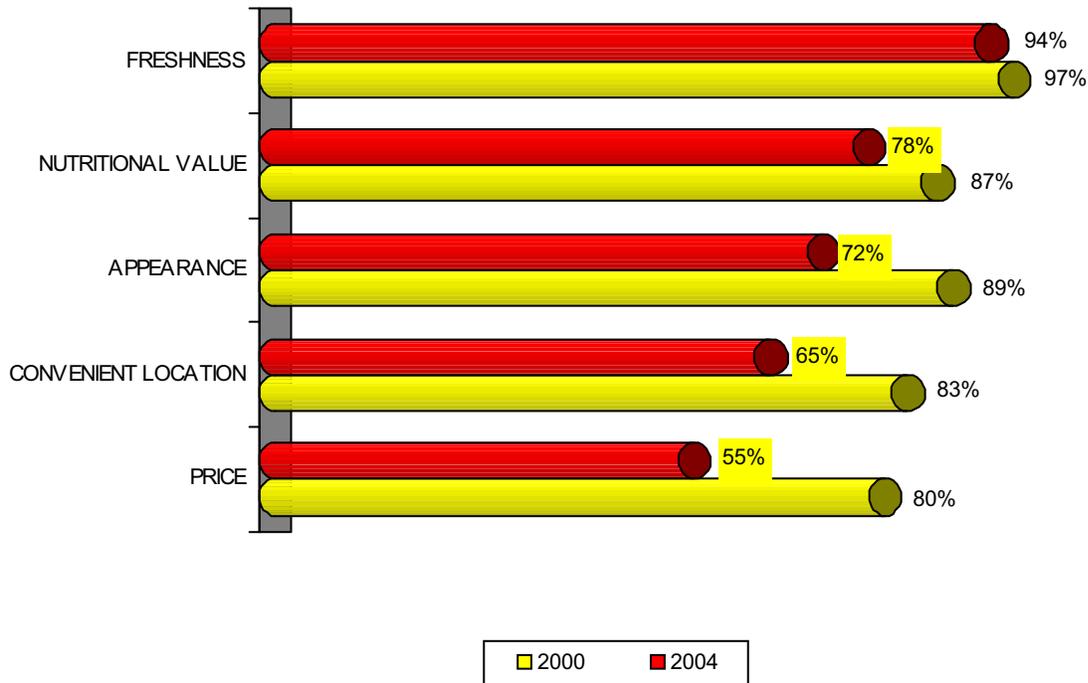
PRIORITIES

PRIORITIES⁵

% RATING A “6” OR “7”

Asheville area consumers were asked to use a “1” to “7” scale to rate the importance of five factors when shopping for food items such as fruit, vegetables, dairy, meat and poultry. Their responses reveal that freshness continues to be consumers’ top priority followed by nutritional value and appearance.

Interestingly, consumers place less importance on nutritional value, food appearance, convenience and price when shopping for food in 2004 than in 2000.



Food priorities do not vary significantly among residents of Buncombe, Madison, and Henderson Counties. However, when measured against priorities in 2000, Asheville area residents place less importance on all attributes except freshness. This finding is most prevalent among Buncombe and Henderson County residents.

	COUNTY							
			BUNCOMBE		MADISON		HENDERSON	
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (100) %	2004 (100) %	2000 (100) %	2004 (100) %	2000 (100) %	2004 (100) %
FRESHNESS	97	94	96	94	98	94	99	95
NUTRITIONAL VALUE	87	78	85	78	85	80	91	79
APPEARANCE	89	72	87	69	87	77	93	79
CONVENIENT LOCATION	83	65	81	62	87	75	88	72
PRICE	80	55	78	48	76	65	85	69

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

⁵ “Please use a ‘1’ to ‘7’ scale to rate the importance of several factors when shopping for food.”

PRIORITIES⁶
 % RATING A “6” OR “7”
 (CONTINUED)

Consumers who allocate more than 10% of their total food expenditure towards locally-grown food are more likely to say that nutritional value is a top priority when shopping for food than those who allocate less towards locally-grown food. They are also much less likely than those who spend a smaller portion of their budget on locally-grown food to consider price a top priority when shopping for food.

% SPENT ON LOCALLY-GROWN FOOD									
			0% TO 5%		6% TO 10%		11%+		
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (123) %	2004 (116) %	2000 (60) %	2004 (49) %	2000 (40) %	2004 (54) %	
FRESHNESS	97	94	99	94	100	96	100	98	
NUTRITIONAL VALUE	87	78	86	78	92	80	76	88	
APPEARANCE	89	72	89	77	92	72	76	75	
CONVENIENT LOCATION	83	65	86	73	73	60	74	66	
PRICE	80	55	86	60	79	70	67	54	

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

⁶ “Please use a ‘1’ to ‘7’ scale to rate the importance of several factors when shopping for food.”

PRIORITIES⁷
 % RATING A “6” OR “7”
 (CONTINUED)

In 2004, consumers age 35 to 54 are much less likely to place a strong emphasis on nutritional value, price, appearance, and convenience when shopping for locally-grown food than in 2000.

AGE									
			LESS THAN 35		35 TO 54		55 & OLDER		
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (38) %	2004 (58) %	2000 (85) %	2004 (149) %	2000 (152) %	2004 (75) %	
FRESHNESS	97	94	100	97	98	92	97	97	
NUTRITIONAL VALUE	87	78	84	75	91	79	85	83	
APPEARANCE	89	72	76	71	88	72	92	83	
CONVENIENT LOCATION	83	65	74	66	86	69	87	72	
PRICE	80	55	76	61	83	60	78	62	

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

Consumers with annual household income between above \$25,000 and \$49,999 are much less concerned about food appearance, convenience, and price when purchasing food than consumers in the same income range in 2000.

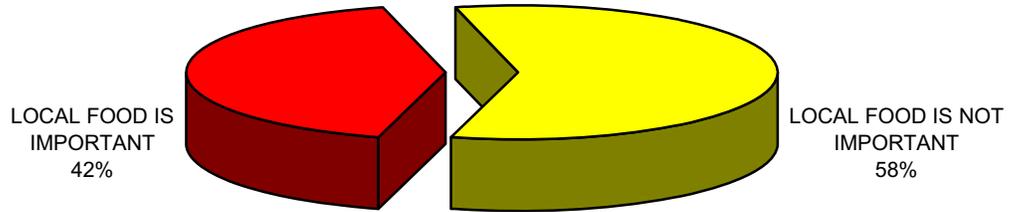
INCOME									
			UNDER \$25,000	UNDER \$25,000	\$25,000- \$49,999	\$25,000- \$49,999	\$50,000 & MORE	\$50,000 & MORE	
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (72) %	2004 (35) %	2000 (93) %	2004 (63) %	2000 (32) %	2004 (87) %	
FRESHNESS	97	94	97	94	99	93	97	92	
NUTRITIONAL VALUE	87	78	92	72	86	84	84	75	
APPEARANCE	89	72	89	78	89	73	75	68	
CONVENIENT LOCATION	83	65	85	69	86	68	78	66	
PRICE	80	55	85	69	85	55	63	51	

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

⁷ “Please use a ‘1’ to ‘7’ scale to rate the importance of several factors when shopping for food.”

PRIORITIES⁸
(CONTINUED)

More than half (58%) of all consumers do not feel that local food is an important consideration in deciding which restaurant or grocery store to patronize.



⁸ "Please use a '1' to '7' scale to rate the importance of several factors when shopping for food."

SATISFACTION WITH VENUES

Asheville area consumers were asked to use a “1” to “7” scale to indicate their overall satisfaction with six venues for the five attributes measured. Findings reveal that ...

- Farmers’ markets enjoy the best image among the venues tested for freshness, nutritional value, and food appearance in 2004. In 2000, they had the best image for freshness and nutritional value.
- Superstores have the best price image in 2004. In 2000, food co-ops and food clubs had the best price image.
- Similar to 2000, grocery stores have the best image for convenience.

	VENUE											
	GROCERY STORES		SUPERST-ORE/SAMS		FARMERS' MARKETS		ROADSIDE STANDS		FOOD CO-OPS.		FOOD CLUBS	
	2000 %	2004 %	2000 %	2004 %	2000 %	2004 %	2000 %	2004 %	2000 %	2004 %	2000 %	2004 %
FRESHNESS	83	66	79	53	92	94	84	83	73	89	76	66
NUTRITIONAL VALUE	80	68	71	57	87	90	82	84	75	80	72	68
PRICE	66	44	69	65	69	54	68	51	70	38	70	49
APPEARANCE	83	64	83	59	78	73	69	64	76	67	78	54
CONVENIENT LOCATION	85	72	65	35	51	36	58	32	35	36	35	27

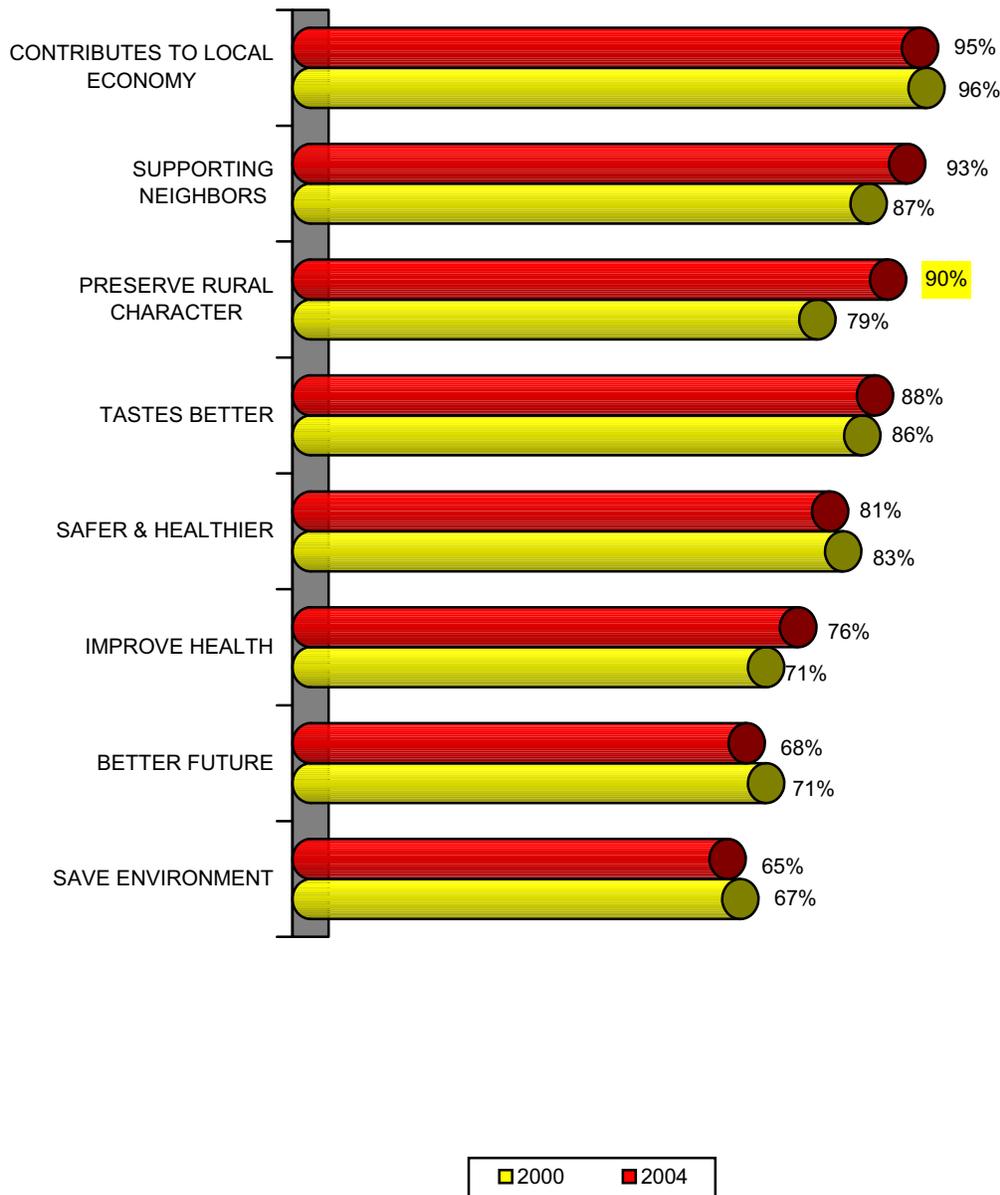
Blue shading indicates the highest score among all venues for each attribute measured in 2000.
 Yellow shading indicates the highest score among all venues for each attribute measured in 2004.

LOCALLY-GROWN FOOD PERCEPTIONS

STATEMENTS ON BELIEVABILITY⁹

% VERY OR SOMEWHAT BELIEVABLE

Consumers were asked how strongly they believe eight statements about locally-grown foods. Similar to 2000, almost all (96%) consumers believe the statement, “Buying locally-grown foods contributes to the economy.” Consumers are much more likely to believe that buying locally-grown food helps preserve the rural character of their region in 2004 than in 2000.



⁹ “For each statement I read, please tell me how believable the statement is to you.”

STATEMENTS ON BELIEVABILITY¹⁰
(CONTINUED)

This table presents *all* consumers' responses when rating the believability of each statement in 2004.

2004					
	VERY BELIEVABLE	SOMEWHAT BELIEVEABLE	NOT VERY BELIEVABLE	NOT AT ALL BELIEVABLE	DON'T KNOW
When you buy locally-grown food, you are supporting your neighbors.	70	23	2	2	2
Buying locally-grown food greatly contributes to the local economy.	66	29	2	2	2
When you buy locally-grown food, you are helping to preserve the rural character of your region.	62	28	7	1	2
Locally-grown food usually tastes better.	58	30	8	2	3
Buying locally-grown food is a way for you to make a statement about making the future better for today's children.	44	24	21	6	5
Buying locally produced foods is a way to improve your personal health & individual well-being.	42	34	16	5	3
Locally-grown foods are safer & healthier for your family.	39	42	14	4	1
When you buy locally-grown foods, you are helping to save the environment because local farmers use environmentally safer agricultural practices.	31	34	22	7	6

¹⁰ "For each statement I read, please tell me how believable the statement is to you."

STATEMENTS ON BELIEVABILITY¹¹
 % VERY OR SOMEWHAT BELIEVABLE
 (CONTINUED)

In 2004, Buncombe County residents are more likely to believe that buying locally-grown food preserves the rural character of their region than in 2000.

	COUNTY							
			BUNCOMBE		MADISON		HENDERSON	
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (100) %	2004 (100) %	2000 (100) %	2004 (100) %	2000 (100) %	2004 (100) %
Buying locally-grown food greatly contributes to the local economy.	96	95	95	94	93	94	97	95
When you buy locally-grown food, you are supporting your neighbors.	87	93	87	94	94	91	87	93
When you buy locally-grown food, you are helping to preserve the rural character of your region.	79	90	75	90	84	87	86	91
Locally-grown food usually tastes better.	86	88	83	88	87	89	94	86
Locally-grown foods are safer & healthier for your family.	83	81	91	81	85	85	85	80
Buying locally produced foods is a way to improve your personal health & individual well-being.	71	76	69	73	76	79	74	84
Buying locally-grown food is a way for you to make a statement about making the future better for today's children.	71	68	68	62	81	83	75	79
When you buy locally-grown foods, you are helping to save the environment because local farmers use environmentally safer agricultural practices.	67	65	65	64	70	69	72	68

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

¹¹ "For each statement I read, please tell me how believable the statement is to you."

STATEMENTS ON BELIEVABILITY¹²
 % VERY OR SOMEWHAT BELIEVABLE
 (CONTINUED)

Consumers younger than 35 are more likely than older consumers to believe the statements listed below. They are also more likely to believe these statements now compared with four years ago.

- *“Buying locally-grown food greatly contributes to the local economy.”*
- *“Locally-grown foods are safer and healthier for your family.”*
- *“When you buy locally-grown food, you are helping to preserve the rural character of your region.”*
- *“Buying locally-grown food is a way for you to make a statement about making the future better for today’s children.”*
- *“Buying locally-grown foods is a way to improve your personal health and individual well-being.”*
- *“When you buy locally-grown foods, you are helping to save the environment because local farmers use environmentally safer agricultural practices.”*

	AGE							
			LESS THAN 35		35 TO 54		55 & OLDER	
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (38) %	2004 (58) %	2000 (85) %	2004 (149) %	2000 (152) %	2004 (75) %
Buying locally-grown food greatly contributes to the local economy.	96	94	95	97	95	96	94	88
When you buy locally-grown food, you are supporting your neighbors.	87	94	87	90	88	97	90	86
When you buy locally-grown food, you are helping to preserve the rural character of your region.	79	90	74	93	85	87	82	89
Locally-grown food usually tastes better.	86	87	77	83	90	89	89	88
Locally-grown foods are safer & healthier for your family.	83	81	69	90	87	82	87	76
Buying locally produced foods is a way to improve your personal health & individual well-being.	71	77	47	80	77	77	77	81
Buying locally-grown food is a way for you to make a statement about making the future better for today’s children.	71	68	60	80	83	74	72	73
When you buy locally-grown foods, you are helping to save the environment because local farmers use environmentally safer agricultural practices.	67	65	53	82	74	64	69	63

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

¹² “For each statement I read, please tell me how believable the statement is to you.”

STATEMENTS ON BELIEVABILITY¹³
 % VERY OR SOMEWHAT BELIEVABLE
 (CONTINUED)

Consumers with annual household income of \$50,000 or more are more likely to believe the statement, “When you buy locally-grown food, you are supporting your neighbors,” than less affluent consumers.

	INCOME							
			UNDER \$25,000	UNDER \$25,000	\$25,000-\$49,999	\$25,000-\$49,999	\$50,000 & MORE	\$50,000 & MORE
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (72) %	2004 (35) %	2000 (93) %	2004 (63) %	2000 (32) %	2004 (87) %
Buying locally-grown food greatly contributes to the local economy.	96	94	94	91	97	94	100	99
When you buy locally-grown food, you are supporting your neighbors.	87	94	94	83	90	93	97	100
When you buy locally-grown food, you are helping to preserve the rural character of your region.	79	90	84	91	83	92	85	94
Locally-grown food usually tastes better.	86	87	91	85	88	83	88	91
Locally-grown foods are safer & healthier for your family.	83	81	87	86	85	85	82	84
Buying locally produced foods is a way to improve your personal health & individual well-being.	71	77	83	75	74	75	75	80
Buying locally-grown food is a way for you to make a statement about making the future better for today’s children.	71	68	79	75	78	78	78	78
When you buy locally-grown foods, you are helping to save the environment because local farmers use environmentally safer agricultural practices.	67	65	86	67	69	64	53	69

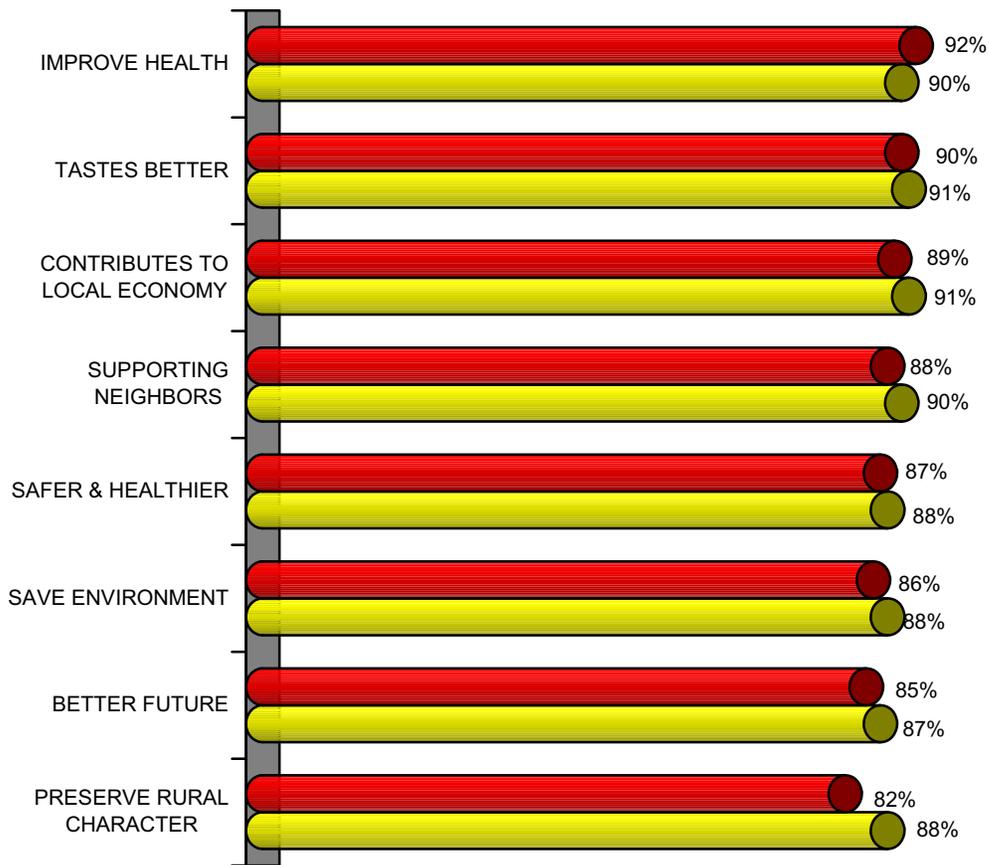
Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

¹³ “For each statement I read, please tell me how believable the statement is to you.”

LIKELIHOOD OF PURCHASE¹⁴

% MORE OR SOMEWHAT MORE LIKELY TO BUY

Consumers were also asked if each of the eight statements would make them more likely to buy, somewhat more likely to buy or have no effect on their purchases of locally-grown food. Their responses reveal that these statements, if believed to be true, would motivate most consumers to purchase locally-grown food. However, consumers indicate that they are slightly less likely to be motivated by all of these statements, with the exception of the statement referencing health improvement, in 2004 than they were in 2000.



2000.

¹⁴ "For each statement, please tell me if the statement would make you"

LIKELIHOOD OF PURCHASE¹⁵
(CONTINUED)

This table presents *all* consumers' responses when indicating whether each statement would motivate them to purchase locally-grown food.

2004				
	MUCH MORE LIKELY TO BUY	SOMEWHAT MORE LIKELY TO BUY	NO EFFECT	DON'T KNOW
Locally-grown food usually tastes better.	68	22	9	2
Buying locally-grown food greatly contributes to the local economy.	61	28	11	1
Buying locally produced foods is a way to improve your personal health & individual well-being.	60	32	6	1
Buying locally-grown food is a way for you to make a statement about making the future better for today's children.	60	25	13	2
Locally-grown foods are safer & healthier for your family.	58	29	11	2
When you buy locally-grown food, you are supporting your neighbors.	57	31	11	1
When you buy locally-grown food, you are helping to preserve the rural character of your region.	55	27	16	2
When you buy locally-grown foods, you are helping to save the environment because local farmers use environmentally safer agricultural practices.	53	33	13	2

¹⁵ "For each statement, please tell me if the statement would make you"

LIKELIHOOD OF PURCHASE¹⁶

% MORE OR SOMEWHAT MORE LIKELY TO BUY
(CONTINUED)

In general, the statements about locally-grown food are more likely to motivate Madison County residents than residents of Buncombe and Henderson Counties. This contrasts with 2000, when Buncombe County residents were most likely to be motivated by the statements.

Consumers in all three counties are more motivated by the statement “When you buy locally-grown food you are helping to preserve the rural character of the region” than in 2004.

	COUNTY							
			BUNCOMBE		MADISON		HENDERSON	
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (100) %	2004 (100) %	2000 (100) %	2004 (100) %	2000 (100) %	2004 (100) %
Buying locally produced foods is a way to improve your personal health & individual well-being.	90	92	96	93	86	91	79	92
Locally-grown food usually tastes better.	91	90	96	91	87	95	80	85
Buying locally-grown food greatly contributes to the local economy.	91	89	95	89	82	88	80	88
When you buy locally-grown food, you are supporting your neighbors.	90	88	96	87	88	93	79	89
Locally-grown foods are safer & healthier for your family.	88	87	93	86	84	93	80	86
When you buy locally-grown foods, you are helping to save the environment because local farmers use environmentally safer agricultural practices.	88	86	96	86	86	93	75	82
Buying locally-grown food is a way for you to make a statement about making the future better for today’s children.	87	85	94	86	84	91	74	81
When you buy locally-grown food, you are helping to preserve the rural character of your region.	88	82	95	81	80	92	76	84

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

¹⁶ “For each statement, please tell me if the statement would make you”

LIKELIHOOD OF PURCHASE¹⁷
% MORE OR SOMEWHAT MORE LIKELY TO BUY
(CONTINUED)

In general, there are no significant differences in likelihood of purchase of locally-grown food among the various age groups from 2000 to 2004.

	AGE							
			LESS THAN 35		35 TO 54		55 & OLDER	
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (38) %	2004 (58) %	2000 (85) %	2004 (149) %	2000 (152) %	2004 (75) %
Buying locally produced foods is a way to improve your personal health & individual well-being.	90	92	84	94	88	89	86	96
Locally-grown food usually tastes better.	91	90	97	94	89	87	86	93
Buying locally-grown food greatly contributes to the local economy.	91	89	94	85	85	90	84	89
When you buy locally-grown food, you are supporting your neighbors.	90	88	97	88	89	89	84	91
Locally-grown foods are safer & healthier for your family.	88	87	89	87	86	89	86	88
When you buy locally-grown foods, you are helping to save the environment because local farmers use environmentally safer agricultural practices.	88	86	95	86	86	87	82	89
Buying locally-grown food is a way for you to make a statement about making the future better for today's children.	87	85	87	90	86	87	81	81
When you buy locally-grown food, you are helping to preserve the rural character of your region.	88	82	85	87	83	86	83	84

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

¹⁷ "For each statement, please tell me if the statement would make you"

LIKELIHOOD OF PURCHASE¹⁸
% MORE OR SOMEWHAT MORE LIKELY TO BUY
(CONTINUED)

Across the board, the statements are less likely to motivate consumers with annual household income of \$50,000 or more to purchase locally-grown food in 2004 than in 2000.

	INCOME							
			UNDER \$25,000	UNDER \$25,000	\$25,000-\$49,999	\$25,000-\$49,999	\$50,000 & MORE	\$50,000 & MORE
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (72) %	2004 (35) %	2000 (93) %	2004 (63) %	2000 (32) %	2004 (87) %
Buying locally produced foods is a way to improve your personal health & individual well-being.	90	92	83	89	79	94	96	89
Locally-grown food usually tastes better.	91	90	82	91	83	94	96	86
Buying locally-grown food greatly contributes to the local economy.	91	89	80	84	81	88	97	88
When you buy locally-grown food, you are supporting your neighbors.	90	88	84	96	83	85	96	88
Locally-grown foods are safer & healthier for your family.	88	87	82	78	77	95	96	84
When you buy locally-grown foods, you are helping to save the environment because local farmers use environmentally safer agricultural practices.	88	86	80	92	80	83	94	81
Buying locally-grown food is a way for you to make a statement about making the future better for today's children.	87	85	80	93	76	81	96	83
When you buy locally-grown food, you are helping to preserve the rural character of your region.	88	82	79	91	77	79	93	83

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

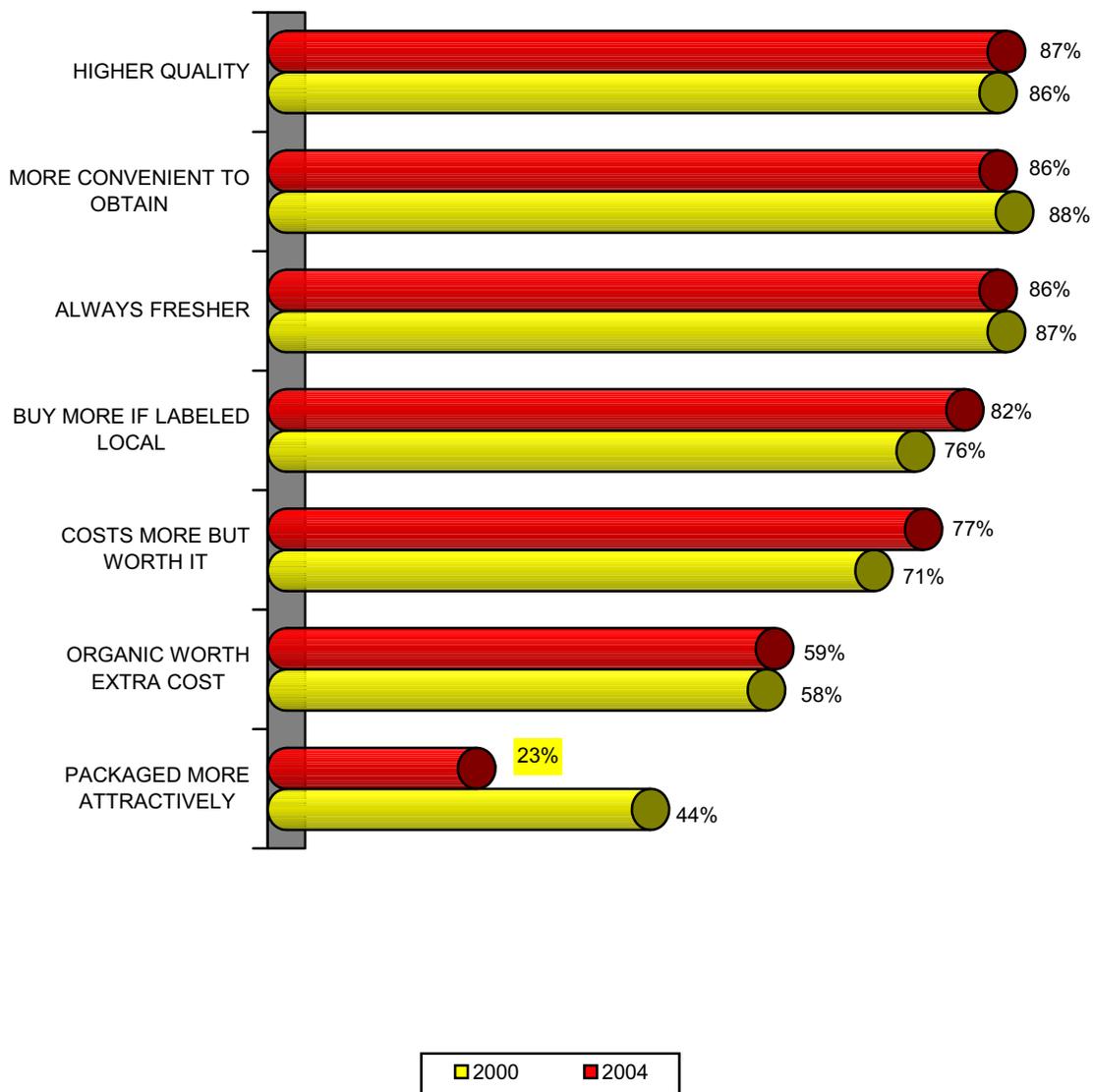
¹⁸ "For each statement, please tell me if the statement would make you"

LOCALLY PRODUCED FOOD VS. FOOD PRODUCED OUTSIDE THE LOCAL AREA¹⁹

% STRONGLY OR SOMEWHAT AGREE

Consumers were asked how strongly they agree or disagree with seven statements about the benefits of locally-grown food versus food produced outside the local area. Their responses reveal that nine in ten (88%) consumers strongly or somewhat agree with the statement, “*Locally produced foods offer higher quality.*”

In 2000, nearly half (44%) agreed that they would buy more locally produced foods if they were packaged more attractively. In 2004, this percentage dropped significantly to 23%.



¹⁹ “For each statement, please tell me whether you strongly agree, somewhat agree, somewhat disagree, or strongly disagree with the statement.”

**LOCALLY PRODUCED FOOD VS.
FOOD PRODUCED OUTSIDE THE LOCAL AREA²⁰**
 % STRONGLY OR SOMEWHAT AGREE
 (CONTINUED)

Madison County residents are more likely to agree that organic foods are worth the extra cost in 2004 than in 2000.

	COUNTY							
			BUNCOMBE		MADISON		HENDERSON	
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (100) %	2004 (100) %	2000 (100) %	2004 (100) %	2000 (100) %	2004 (100) %
Locally produced foods offer higher quality.	86	87	86	88	85	86	87	84
I would buy more locally produced foods if they were more convenient to obtain.	88	86	88	86	91	87	88	84
Locally produced foods are always fresher.	87	86	88	91	85	86	84	74
I would buy more locally produced foods if they were labeled as local.	76	82	76	84	74	81	75	77
When locally produced foods cost a little more, they are worth the extra cost.	71	77	68	77	82	81	76	77
When locally produced organic foods cost more than other locally produced foods, they are worth the extra cost.	58	59	62	60	41	63	51	56
I would buy more locally-grown foods if they were packaged more attractively.	44	23	46	24	46	33	39	20

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

²⁰ "For each statement, please tell me whether you strongly agree, somewhat agree, somewhat disagree, or strongly agree with the statement."

**LOCALLY PRODUCED FOOD VS.
FOOD PRODUCED OUTSIDE THE LOCAL AREA²¹**
 % STRONGLY OR SOMEWHAT AGREE
 (CONTINUED)

Interestingly, all age groups are much more likely to agree with the statement “*Locally produced foods offer higher quality*” in 2004 than in 2000.

In general, consumers 55 and older are much less likely this year than they were in 2000 to agree with all statements except “*Locally produced foods offer higher quality.*”

	AGE							
			LESS THAN 35		35 TO 54		55 & OLDER	
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (38) %	2004 (58) %	2000 (85) %	2004 (149) %	2000 (152) %	2004 (75) %
Locally produced foods offer higher quality.	86	87	50	83	56	89	54	83
I would buy more locally produced foods if they were more convenient to obtain.	88	86	92	86	95	87	86	82
Locally produced foods are always fresher.	87	86	76	83	88	89	86	76
I would buy more locally produced foods if they were labeled as local.	76	82	73	75	71	83	78	75
When locally produced foods cost a little more, they are worth the extra cost.	71	77	71	83	72	81	77	76
When locally produced organic foods cost more than other locally produced foods, they are worth the extra cost.	58	59	51	74	53	52	74	45
I would buy more locally-grown foods if they were packaged more attractively.	44	23	40	34	31	21	49	27

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

²¹ “For each statement, please tell me whether you strongly agree, somewhat agree, somewhat disagree, or strongly agree with the statement.”

**LOCALLY PRODUCED FOOD VS.
FOOD PRODUCED OUTSIDE THE LOCAL AREA²²**
% STRONGLY OR SOMEWHAT AGREE
(CONTINUED)

In 2004, consumers with annual household income less than \$25,000 are more likely to agree with nearly all statements regarding locally produced foods than they were in 2000.

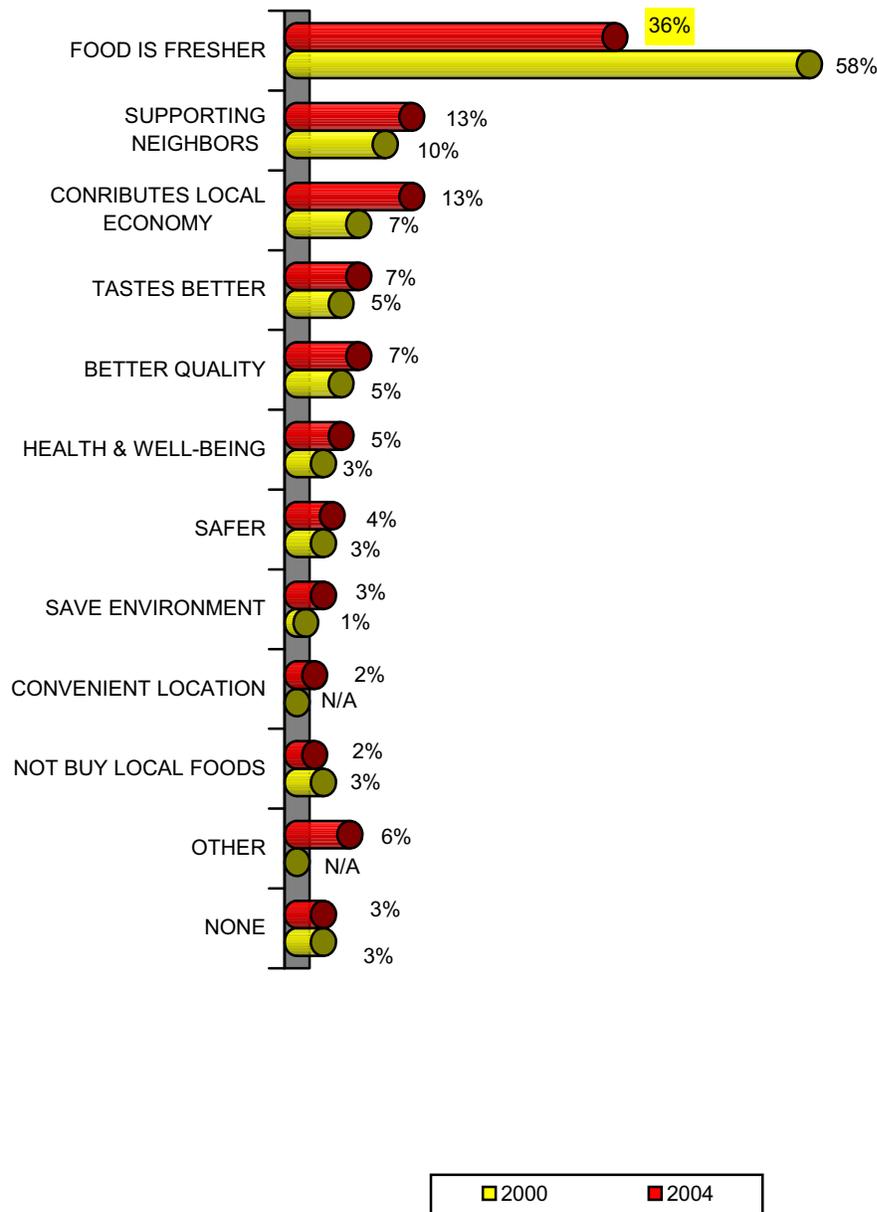
	INCOME							
			UNDER \$25,000	UNDER \$25,000	\$25,000-\$49,999	\$25,000-\$49,999	\$50,000 & MORE	\$50,000 & MORE
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (72) %	2004 (35) %	2000 (93) %	2004 (63) %	2000 (32) %	2004 (87) %
Locally produced foods offer higher quality	86	87	57	96	59	85	56	88
I would buy more locally produced foods if they were more convenient to obtain	88	86	88	91	93	77	94	89
Locally produced foods are always fresher	87	86	87	84	86	81	87	91
I would buy more locally produced foods if they were labeled as local	76	82	75	89	80	79	81	83
When locally produced foods cost a little more, they are worth the extra cost.	71	77	80	92	80	73	69	86
When locally produced organic foods cost more than other locally produced foods they are worth the extra cost	58	59	63	91	61	61	60	62
I would buy more locally-grown foods if they were packaged more attractively	44	23	53	78	42	24	41	23

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

²² "For each statement, please tell me whether you strongly agree, somewhat agree, somewhat disagree, or strongly agree with the statement."

TOP REASON FOR BUYING LOCALLY PRODUCED FOOD²³

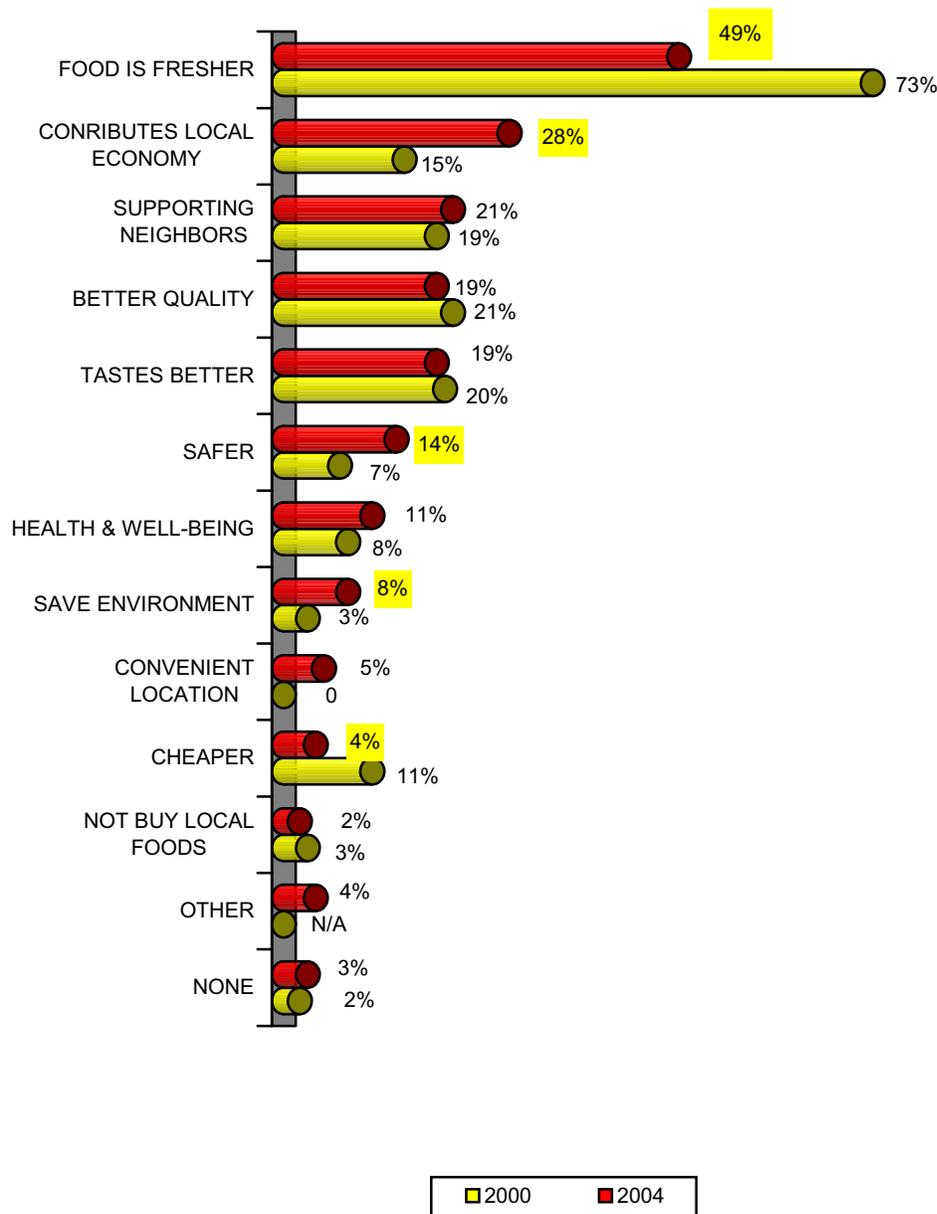
Freshness continues to be the #1 reason consumers would consider buying locally produced food in 2004, although it is a much less compelling reason when compared to 2000. When asked what would be the one most important reason they would buy locally produced food, 36% of all consumers mentioned freshness. Support for neighbors and contribution to the local economy (13%) rank a distant second.



²³ "Could you please tell me the one most important reason why you would buy locally produced food?"

TOTAL REASONS FOR BUYING LOCALLY PRODUCED FOOD²⁴

When asked to name *all* the reasons they might buy locally produced food, five in ten (49%) consumers mentioned freshness. Consumers also mentioned contribution to the local economy (28%), supporting neighbors (21%), and tastes better (19%). Again, note the decline from 2000 in the percentage of consumers who say they buy locally produced foods because the food is fresher.



²⁴ “Could you please tell me the one most important reason why you would buy locally produced food? Why else do you buy it?”

TOTAL REASONS FOR BUYING LOCALLY PRODUCED FOOD²⁵
(CONTINUED)

Reasons for buying locally produced food vary by county. Henderson and Buncombe County residents are much less likely to say they purchase locally produced foods because they are fresher in 2004 than they were in 2000.

	COUNTY							
			BUNCOMBE		MADISON		HENDERSON	
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (100) %	2004 (100) %	2000 (100) %	2004 (100) %	2000 (100) %	2004 (100) %
FOOD IS FRESHER	73	49	74	49	55	55	76	46
IT CONTRIBUTES TO THE LOCAL ECONOMY	15	28	16	27	29	33	11	29
I AM SUPPORTING MY NEIGHBORS	19	21	18	23	26	20	21	15
FOOD IS OF BETTER QUALITY	21	19	20	16	27	19	21	27
TASTES BETTER	20	19	17	18	12	15	29	21
FOOD IS SAFER	7	14	7	16	5	14	8	8
MY PERSONAL HEALTH & WELL-BEING	8	11	9	13	6	6	5	8
I AM HELPING SAVE THE ENVIRONMENT	3	8	4	10	3	5	1	3
CONVENIENT LOCATION	-	5	-	4	-	1	-	8
CHEAPER	11	4	14	4	4	5	6	2
I DON'T BUY LOCALLY PRODUCED FOOD	3	2	3	2	4	2	2	3
OTHER	-	4	-	4	-	2	-	5
NONE	2	3	1	3	5	2	2	3

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

²⁵ "Could you please tell me the one most important reason why you would buy locally produced food? Why else do you buy it?"

TOTAL REASONS FOR BUYING LOCALLY PRODUCED FOOD²⁶
(CONTINUED)

In general, the older the consumer the more likely freshness is a top reason for buying locally-grown food. However, for consumers 55 years of age or older, freshness is less likely to be a top reason for buying locally produced food in 2004 than it was in 2000.

	AGE							
			LESS THAN 35		35 TO 54		55 & OLDER	
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (38) %	2004 (58) %	2000 (85) %	2004 (149) %	2000 (152) %	2004 (75) %
FOOD IS FRESHER	73	49	55	37	57	52	76	55
IT CONTRIBUTES TO THE LOCAL ECONOMY	15	28	26	34	23	32	15	22
I AM SUPPORTING MY NEIGHBORS	19	21	29	25	19	19	21	15
FOOD IS OF BETTER QUALITY	21	19	8	12	28	27	24	15
TASTES BETTER	20	19	21	20	21	18	19	17
FOOD IS SAFER	7	14	5	19	5	8	7	16
MY PERSONAL HEALTH & WELL-BEING	8	11	11	10	7	9	6	8
I AM HELPING SAVE THE ENVIRONMENT	3	8	-	7	2	5	2	7
CONVENIENT LOCATION	-	5	-	5	-	3	-	6
CHEAPER	11	4	20	8	12	3	9	2
I DON'T BUY LOCALLY PRODUCED FOOD	3	2	3	2	1	3	4	2
OTHER	-	4	-	4	-	3	-	5
NONE	2	3	5	3	2	3	2	2

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

²⁶ "Could you please tell me the one most important reason why you would buy locally produced food? Why else do you buy it?"

TOTAL REASONS FOR BUYING LOCALLY PRODUCED FOOD²⁷
(CONTINUED)

Freshness is less of a compelling reason for buying locally-grown food among all income segments in 2004 than it was in 2000.

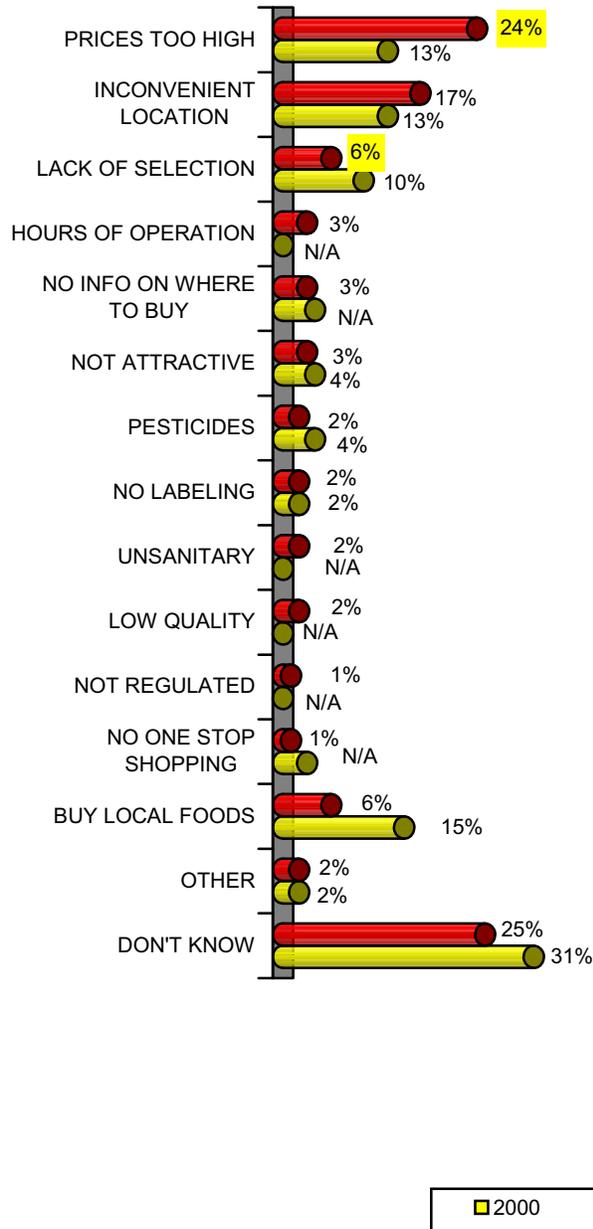
	INCOME							
			UNDER \$25,000	UNDER \$25,000	\$25,000-\$49,999	\$25,000-\$49,999	\$50,000 & MORE	\$50,000 & MORE
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (72) %	2004 (35) %	2000 (93) %	2004 (63) %	2000 (32) %	2004 (87) %
FOOD IS FRESHER	73	49	68	47	65	46	69	47
IT CONTRIBUTES TO THE LOCAL ECONOMY	15	28	15	28	22	28	22	35
I AM SUPPORTING MY NEIGHBORS	19	21	19	19	21	24	25	22
FOOD IS OF BETTER QUALITY	21	19	25	8	16	25	34	18
TASTES BETTER	20	19	17	11	24	21	16	17
FOOD IS SAFER	7	14	9	17	10	9	-	9
MY PERSONAL HEALTH & WELL-BEING	8	11	7	11	7	10	6	9
I AM HELPING SAVE THE ENVIRONMENT	3	8	1	3	1	7	3	10
CONVENIENT LOCATION	-	5	-	6	-	1	-	9
CHEAPER	11	4	17	6	13	9	6	1
I DON'T BUY LOCALLY PRODUCED FOOD	3	2	4	3	4	1	-	4
OTHER	-	4	-	6	-	4	-	3
NONE	2	3	5	6	1	-	3	3

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

²⁷ "Could you please tell me the one most important reason why you would buy locally produced food? Why else do you buy it?"

TOP REASON FOR NOT BUYING LOCALLY PRODUCED FOOD²⁸

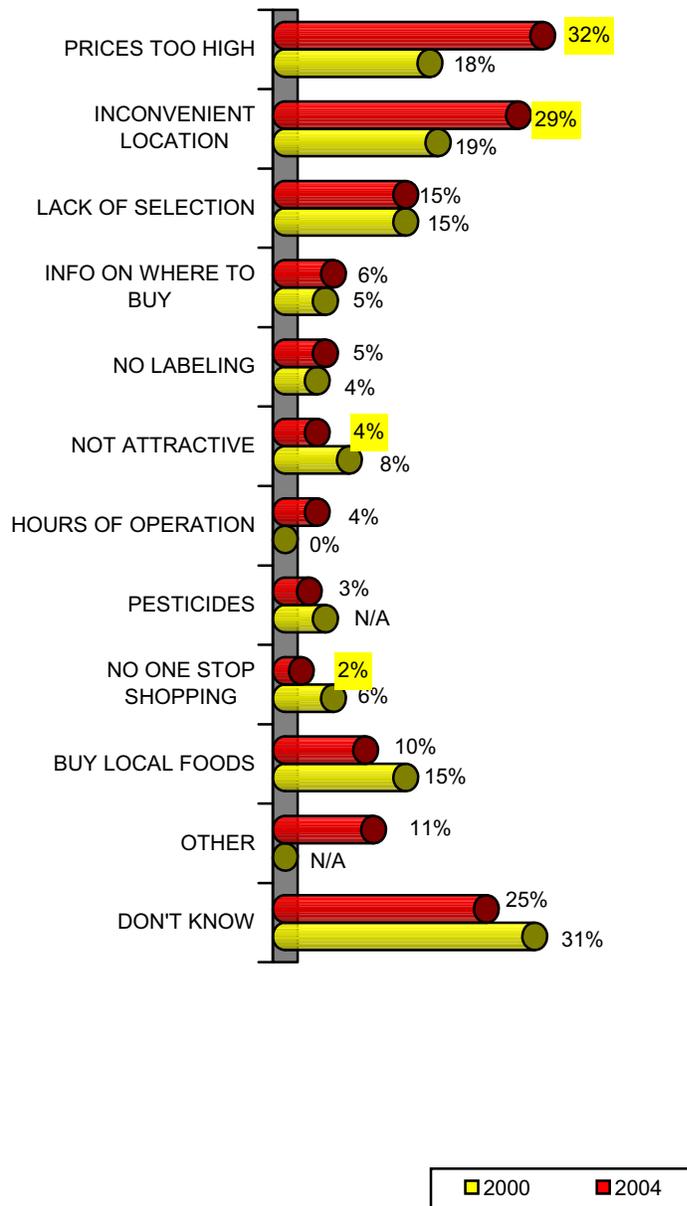
The top reasons for not buying locally produced food are price and inconvenience. The percentage of people who say that price keeps them from purchasing locally produced foods has increased from 13% in 2000 to 25% in 2004. 17% feel inconvenient locations are a problem.



²⁸ "Could you please tell me the one most important reason why you NOT would buy locally produced food?"

TOTAL REASONS FOR NOT BUYING LOCALLY PRODUCED FOOD²⁹

When asked to name *all* their reasons for not buying locally produced food, 32% of all consumers mentioned high prices, 29% mentioned inconvenient locations, and 15% mentioned lack of selection.



²⁹ "Could you please tell me the one most important reason why you NOT would buy locally produced food? Why else wouldn't you buy locally produced food?"

TOTAL REASONS FOR NOT BUYING LOCALLY PRODUCED FOOD³⁰
(CONTINUED)

Buncombe County residents are more likely than other residents to mention price as the top reason for not buying locally produced foods in 2004. Residents in this county are more likely to place higher importance on price and convenience this year than in 2000.

	COUNTY							
			BUNCOMBE		MADISON		HENDERSON	
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (100) %	2004 (100) %	2000 (100) %	2004 (100) %	2000 (100) %	2004 (100) %
PRICES TOO HIGH	18	32	20	35	10	24	16	25
INCONVENIENT LOCATION	19	29	20	35	20	20	17	17
LACK OF SELECTION	15	15	18	15	11	19	9	13
I BUY LOCALLY PRODUCED FOOD	15	10	7	10	15	4	34	12
LACK OF INFO ABOUT WHERE TO BUY	5	6	6	7	1	5	5	3
NO LABELING ON FOOD INDICATING LOCALLY-GROWN	4	5	5	5	2	4	3	6
FOOD ISN'T PACKAGED ATTRACTIVELY	8	4	10	5	3	4	3	3
HOURS OF OPERATION	-	4	-	5	-	1	-	3
PESTICIDES	5	3	5	3	3	3	6	2
CAN'T BUY ALL GROCERY ITEMS AT ONE LOCATION	6	2	6	2	1	5	6	3
NOT FRESH	-	2	-	3	-	1	-	1
UNSANITARY	-	2	-	1	-	6	-	3
LOW QUALITY	-	2	-	1	-	2	-	3
NOT REGULATED	-	1	-	2	-	-	-	-
DON'T LIKE TO SHOP OUTSIDE	-	1	-	1	-	2	-	-
OTHER	-	3	-	3	-	6	-	-
DON'T KNOW	31	25	33	20	53	35	23	36

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

³⁰ "Could you please tell me the one most important reason why you NOT would buy locally produced food? Why else wouldn't you buy locally produced food?"

TOTAL REASONS FOR NOT BUYING LOCALLY PRODUCED FOOD³¹
(CONTINUED)

Consumers with annual household income less than \$25,000 per year are much more likely this year than they were in 2000 to claim high prices keep them from purchasing locally produced foods.

	AGE							
			LESS THAN 35		35 TO 54		55 & OLDER	
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (38) %	2004 (58) %	2000 (85) %	2004 (149) %	2000 (152) %	2004 (75) %
PRICES TOO HIGH	18	32	18	29	20	29	13	27
INCONVENIENT LOCATION	19	29	26	25	23	24	15	23
LACK OF SELECTION	15	15	24	22	8	16	12	10
I BUY LOCALLY PRODUCED FOOD	15	10	13	3	17	11	20	8
LACK OF INFO ABOUT WHERE TO BUY	5	6	3	7	6	6	4	2
NO LABELING ON FOOD INDICATING LOCALLY-GROWN	4	5	3	2	3	7	4	3
FOOD ISN'T PACKAGED ATTRACTIVELY	8	4	3	5	2	3	8	6
HOURS OF OPERATION	-	4	-	2	1	3	1	3
PESTICIDES	5	3	3	3	3	2	5	3
CAN'T BUY ALL GROCERY ITEMS AT ONE LOCATION	6	2	11	5	6	3	2	2
NOT FRESH	-	2	-	-	-	2	-	2
UNSANITARY	-	2	-	2	-	4	-	3
LOW QUALITY	-	2	-	2	-	3	-	-
NOT REGULATED	-	1	-	-	-	1	-	-
DON'T LIKE TO SHOP OUTSIDE	-	1	-	-	-	1	-	1
OTHER	-	3	-	5	-	3	-	1
DON'T KNOW	31	25	29	32	35	27	39	35

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

³¹ "Could you please tell me the one most important reason why you would NOT buy locally produced food?"

TOTAL REASONS FOR NOT BUYING LOCALLY PRODUCED FOOD³²
(CONTINUED)

Consumers with household income less than \$25,000 are less likely than other consumers to feel inconvenient location is a reason for not buying locally produced food.

	INCOME							
			UNDER \$25,000	UNDER \$25,000	\$25,000-\$49,999	\$25,000-\$49,999	\$50,000 & MORE	\$50,000 & MORE
	2000 TOTAL STUDY (300) %	2004 TOTAL STUDY (300) %	2000 (72) %	2004 (35) %	2000 (93) %	2004 (63) %	2000 (32) %	2004 (87) %
PRICES TOO HIGH	18	32	12	22	13	27	22	22
INCONVENIENT LOCATION	19	29	9	17	17	27	25	23
LACK OF SELECTION	15	15	8	17	15	13	22	9
I BUY LOCALLY PRODUCED FOOD	15	10	28	8	20	7	16	10
LACK OF INFO ABOUT WHERE TO BUY	5	6	1	8	5	3	6	4
NO LABELING ON FOOD INDICATING LOCALLY-GROWN	4	5	4	8	2	3	3	5
FOOD ISN'T PACKAGED ATTRACTIVELY	8	4	7	11	3	4	6	3
HOURS OF OPERATION	-	4	-	-	2	3	-	4
PESTICIDES	5	3		3		4		3
CAN'T BUY ALL GROCERY ITEMS AT ONE LOCATION	6	2	3	3	10	3	-	3
NOT FRESH	-	2	-	-	-	1	-	1
UNSANITARY	-	2	-	-	-	7	-	2
LOW QUALITY	-	2	-	3	-	3	-	2
NOT REGULATED	-	1	-	-	-	-	-	1
DON'T LIKE TO SHOP OUTSIDE	-	1	-	-	-	1	-	-
OTHER	-	3	-	9	-	1	-	2
DON'T KNOW	31	25	39	25	34	33	28	38

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

³² "Could you please tell me the one most important reason why you NOT would buy locally produced food?"

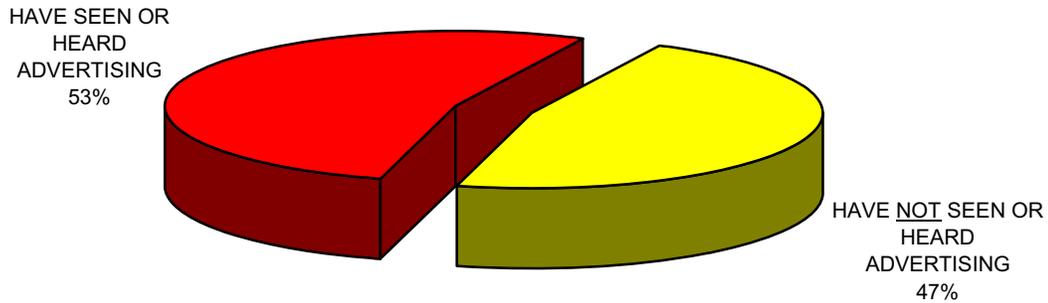


MEDIA AWARENESS



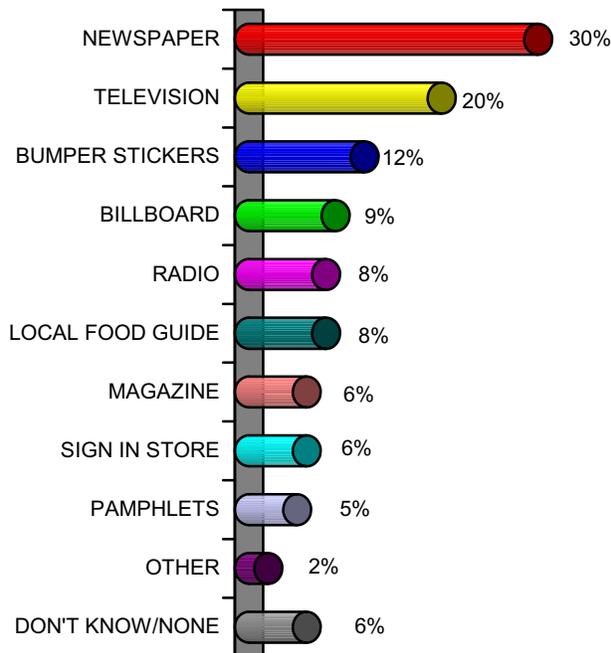
ADVERTISING AWARENESS³³

Positively, over half (53%) Asheville area consumers claim they have seen or heard advertising promoting locally-grown food in the past year.



2004

Of those who recall seeing or hearing an advertisement for locally-grown food, 30% say they saw an advertisement in a newspaper. Two in ten (20%) heard about locally-grown food on television, and 12% saw bumper stickers.

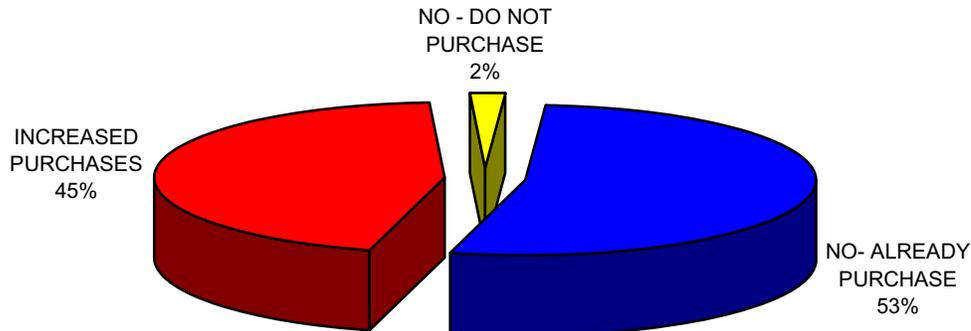


2004

³³ "Have you seen or heard any advertising or messages promoting locally grown food in the last year? If so, do you remember where?"

INFLUENCE OF ADVERTISING³⁴

Also positive, nearly half (45%) of all Asheville area consumers claim that seeing or hearing the advertisements motivated them to increase their purchases of locally-grown food.



Asheville area consumers older than 55 are most likely to claim that advertisements have increased their purchases of locally-grown foods.

AGE				
	2004 TOTAL STUDY (300) %	LESS THAN 35 (58) %	35-45 (149) %	55 & OLDER (75) %
No – already purchase what is needed	53	48	57	44
Yes – Increased purchases	45	44	39	51
No – do not purchase	2	7	5	5

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

Consumers with incomes under \$25,000 are more likely than other consumers to increase their purchases of locally-grown foods due to advertising.

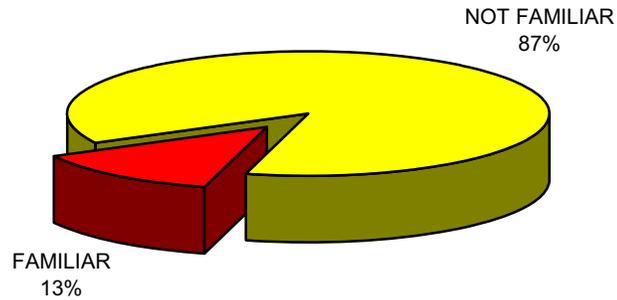
INCOME				
	2004 TOTAL STUDY (300) %	UNDER \$25,000 (35) %	\$25,000 TO \$49,999 (63) %	\$50,000 & MORE (87) %
No – already purchase what is needed	53	38	57	50
Yes – Increased purchases	45	56	37	48
No – do not purchase	2	6	6	1

Yellow shading indicates a significant difference from the previous year at the 95% confidence interval.

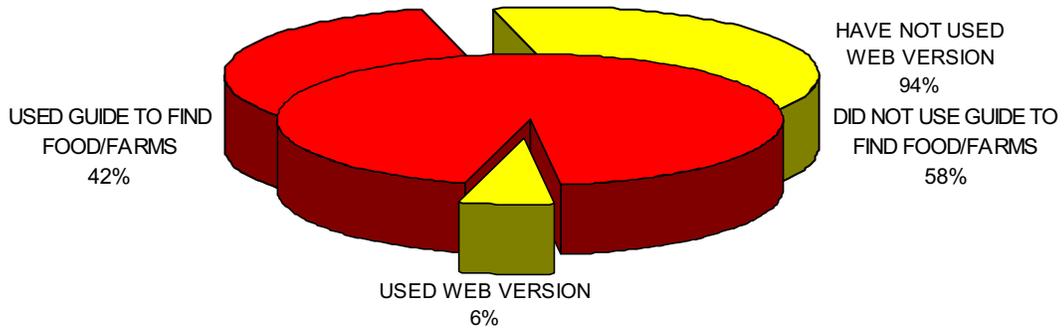
³⁴ “Have these messages or what you learned about locally grown food increased your purchase of locally grown food?”

LOCAL FOOD GUIDE³⁵

Most consumers (87%) are not familiar with the Local Food Guide.

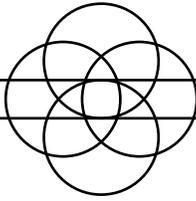


Of those who have heard of the Food Guide, 42% used it to find local food or farms.



Less than one in ten (6%) consumers who are familiar with the Local Food Guide has used the web version of the guide.

³⁵ "Are you familiar with the Local Food Guide, published by the Appalachian Sustainable Agriculture Project? Have you used it to find local food or farms? Have you used the web version of the guide?"



Crossroads Resource Center

7415 Humboldt Ave. S. / Minneapolis, Minnesota 55423 / 612.869.8664
<kmeter@crcworks.org> <<http://www.crcworks.org/>>

Tools for Community Self-determination

Western North Carolina Food & Farm Economy

Highlights of a data compilation

by Ken Meter, Crossroads Resource Center (Minneapolis) for
Appalachian Sustainable Agriculture Program (ASAP)
April 3, 2006

Western North Carolina Region

23 Counties — *Alleghany, Ashe, Avery, Buncombe, Burke, Caldwell, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania, Watauga, Wilkes, and Yancey Counties*

One million residents hold \$20 billion in annual purchasing power

The region's farms (2002)

12,212 farms. 22% of North Carolina's farms

- Average size is 85 acres. 57% of farms are less than 50 acres.
- Average value of land and buildings is \$366,166
- 450,641 acres total cropland.
- \$543 million of farm commodities marketed by the region's farmers.
- \$5.4 million of farm subsidies collected by growers (5.6% of state's).
- 11 million pounds of tobacco produced (primarily in Ashe, Buncombe, Haywood, Madison, Watauga, Wilkes, and Yancey Counties — one-quarter of all North Carolina farms raising tobacco are in the ASAP region, but they produce only 3% of the state's tobacco).
- 7.3 million pounds of potatoes produced (primarily in Ashe, Avery, Buncombe, and Cherokee Counties — This is over half of all North Carolina farms raising potatoes, but only 2% of the state's production).
- 268,000 tons of forage (hay) produced (primarily in Alleghany, Ashe, Buncombe, Haywood, Madison, Rutherford and Wilkes Counties — 20% of North Carolina's crop).
- \$218 million of poultry sold — a 10% decline from 1997. One of every seven poultry operations in the state is in the ASAP region, with production concentrated in Wilkes County.
- 287,628 tons of corn silage produced — 33% of state total.
- \$37 million of cattle sold in 2002 (down from \$42 million in 1997), 20% of the state's sales. Primary producers are Alleghany, Ashe, Watauga, and Wilkes Counties.
- \$30 million of milk produced (down from \$37 million in 1997), 20% of the state's sales. Primary producers are Alleghany, Buncombe, Haywood, and Wilkes Counties.

- The region hosts 61% of North Carolina's orchard acreage, with 8,131 acres on 373 farms.
- One of every five of the state's farms raising vegetables is located in the ASAP region, with 495 farms. However, these farms hold only 11% of North Carolina's vegetable acreage (7,284 acres).
- The 101 farms in ASAP's region that sell organic foods are 25% of the state's organic producers, selling \$425,000 of organic products — 8% of the state's total. Primary organic producers are Ashe, Buncombe, Madison, Rutherford, and Wilkes Counties.
- 740 farms sold \$3.1 million of food directly to consumers in 2002 — a 20% increase over 1997. This is one-quarter of all North Carolina farms selling direct. Primary direct sellers are Ashe, Buncombe, Henderson, and Wilkes Counties. Direct sales account for only 0.6% of all commodity sales in the region.

ASAP region's farmers produce \$945 million of food commodities per year (14-year average 1990-2003), spending \$595 million to raise them, for an average gain of \$351 million for crop and livestock production each year, and a total gain of \$5 billion over those years. Still, 52 % of the region's farms reported net losses in 2002.

Farmers earn another \$146 million per year of farm-related income — primarily custom work, rental income and sale of forest products or Christmas trees.

The region's consumers:

The region's consumers spend \$2.1 billion buying food each year, primarily from outside the region. Only \$3.1 million of food products (0.6%) are sold by farmers directly to consumers.

Farm and food economy summary:

Farmers gain \$351 million each year producing food commodities, yet spend \$200 million buying outside inputs, while the region's consumers spend at least \$1.5 billion buying food from outside. While production of agricultural commodities produces a surplus to the region, consumers buy little of this food. Moreover, consumer expenditures for food essentially leave the community. This is a total loss to the region of \$1.3 billion of potential wealth *each year*. This loss amounts to 4 times the value of all food commodities raised in the region.

ASAP region: markets for food

	<i>millions</i>
Meats, poultry, fish, and eggs	\$ 347
Fruits & vegetables	205
Cereals and bakery products	135
Dairy products	175
“Other,” incl. sweets, fats, & oils	414

North Carolina Highlights (2002 Agriculture Census)

North Carolina ranking among U.S. producers:

	2002 sales
Number 1 in tobacco production	\$630 million
Number 2 in hog & pig production	\$2.2 billion
Number 2 in Christmas tree production	\$57 million
Number 3 in poultry and egg production	\$2.3 billion
Number 6 in cotton production	\$112 million

Government payments received by farmers: \$97.7 million in 2002 (86% increase over 1997).

Individual County rankings and highlights (2002 Agriculture Census):

Counties with largest rise in government payments:

	Pct rise	1997	2002
Henderson	1,628 %	134,000	2,315,000
Alleghany	497 %	70,000	418,000
McDowell	519 %	27,000	167,000
Transylvania	333 %	12,000	52,000
Haywood	237 %	87,000	293,000
Polk	180 %	55,000	154,000

Counties with largest increase in market income from commodity sales:

	Pct gain	1997	2002
McDowell	65 %	48,700,000	80,700,000
Transylvania	57 %	10,600,000	16,600,000
Avery	55 %	18,000,000	28,000,000
Rutherford	50 %	6,100,000	9,200,000
Graham	39 %	1,300,000	1,800,000
Henderson	29 %	47,000,000	61,000,000
Polk	27 %	3,600,000	4,500,000
Jackson	26 %	6,400,000	8,100,000

Counties with largest declines in market income from commodity sales:

	Pct drop	1997	2002
Clay	-71 %	4,600,000	1,300,000
Swain	-55 %	2,500,000	1,140,000
Buncombe	-38 %	35,000,000	22,000,000
Caldwell	-35 %	24,000,000	16,000,000
Haywood	-18 %	15,000,000	12,000,000

County rankings:

Sales:

Poultry & Eggs	Rank (NC)	Rank (US)	2002 sales
Wilkes	2	12	192,000,000
Christmas Trees	Rank (NC)	Rank (US)	2002 sales
Avery	1	3	18,000,000
Ashe	2	4	16,900,000
Alleghany	3	8	8,800,000
Jackson	4	12	5,200,000
Watauga	5	28	2,200,000
Mitchell	6	34	1,700,000
Burke	7	57	907,000
Macon	8	97	551,000
Madison	9		473,000
Nursery Crops	Rank (NC)	Rank (US)	2002 sales
Burke	6		15,000,000
McDowell	7		15,000,000
Dairy	Rank (NC)	Rank (US)	2002 sales
Alleghany	3		8,400,000
Cattle & Calves	Rank (NC)	Rank (US)	2002 sales
Wilkes	4		6,000,000
Ashe	8		5,000,000
Tobacco	Rank (NC)	Rank (US)	2002 sales
Madison	39	100	4,900,000
Acquaculture	Rank (NC)	Rank (US)	2002 sales
Transylvania	2		3,400,000
Graham	6		1,000,000
Fruits	Rank (NC)	Rank (US)	2002 sales
Wilkes	8		840,000
Polk	9		755,000
Sheep & Goats	Rank (NC)	Rank (US)	2002 sales
Madison	5		119,000
Haywood	7		99,000
Buncombe	8		85,000

Numbers:

Chickens, broilers	Rank (NC)	Rank (US)	2002 count
Wilkes	1		17,600,000
Chickens, layers	Rank (NC)	Rank (US)	2002 count
Cherokee	5		not disclosed
Wilkes	8		530,583
Sheep & Lambs	Rank (NC)	Rank (US)	2002 count
Madison	1		1,196
Rutherford	2		1,188
Ashe	5		964
Haywood	6		936
Bee colonies	Rank (NC)	Rank (US)	2002 count
Macon	9		462

Acres:

Apples	Rank (NC)	Rank (US)	2002 acres
Henderson	1	14	6,618
Polk	2		343
Wilkes	3		306
All berries	Rank (NC)	Rank (US)	2002 acres
Jackson	6		not disclosed
All Vegetables	Rank (NC)	Rank (US)	2002 acres
Henderson	5		4,485
Snap Beans	Rank (NC)	Rank (US)	2002 acres
Henderson	2	22	2,959
Sweet Corn	Rank (NC)	Rank (US)	2002 acres
Buncombe	4		200
Collard greens	Rank (NC)	Rank (US)	2002 acres
Cherokee	4		not disclosed
Dry herbs	Rank (NC)	Rank (US)	2002 acres
Transylvania	2		not disclosed
Forage	Rank (NC)	Rank (US)	2002 acres
Wilkes	3		23,167
Corn silage	Rank (NC)	Rank (US)	2002 acres
Wilkes	2		5,751
Henderson	7		2,822

Sod harvested	Rank (NC)	Rank (US)	2002 acres
Transylvania	6		not disclosed

**Estimated annual consumption of fruits in ASAP region (USDA)
(fresh and processed)**

	million pounds
Apples	43.4
Apricots	0.9
Avocados	2.5
Bananas	26.8
Blackberries	0.1
Blueberries	0.3
Cantaloupe	11.1
Cherries	1.7
Cranberries	2.0
Dates	0.2
Figs	0.5
Grapes	19.8
Grapefruit	12.7
Honeydew melons	2.2
Kiwi	0.5
Lemons	8.8
Limes	1.5
Mangoes	2.0
Olives	1.2
Oranges	77.0
Papayas	0.8
Peaches	9.8
Pears	5.5
Pineapple	13.1
Plums	3.2
Raspberries	0.1
Strawberries	6.1
Tangerines	3.4
Watermelons	13.9

**Estimated annual consumption of vegetables in ASAP region (USDA)
(fresh and processed)**

	million pounds
Artichokes	0.96
Asparagus	1.24
Beans (Dry)	7.36
Beans (Snap)	7.32
Broccoli	7.14
Brussels Sprouts	0.23
Cabbage	9.63
Carrots	12.56
Cauliflower	1.80
Celery	6.53
Corn (Sweet)	26.21
Cucumbers	11.53
Eggplant	0.72
Escarole & Endive	0.31
Garlic	2.50
Lettuce (Head)	22.38
Lettuce (Romaine)	8.28
Mushrooms	4.26
Onions	19.76
Peas (Green)	2.84
Peas & Lentils	0.70
Peppers (Bell)	6.96
Peppers (Chile)	4.99
Potatoes	135.00
Radishes	0.47
Spinach	2.38
Sweet Potatoes	3.69
Tomatoes	87.43

Key data sources:

Bureau of Economic Analysis data on farm production balance

<http://www.bea.doc.gov/bea/regional/reis/>

Food consumption estimates from Bureau of Labor Statistics Consumer Expenditure Survey

<http://www.bls.gov/cex/home.htm>

U.S. Census of Agriculture

<http://www.nass.usda.gov/census/>

USDA/Economic Research Service food consumption data:

<http://www.ers.usda.gov/data/foodconsumption/>

USDA/ Economic Research Service farm income data:

<http://ers.usda.gov/Data/FarmIncome/finfidmu.htm>

For more information:

To see results from *Finding Food in Farm Country* studies in other regions of Minnesota, Iowa, California, Hawaii: <http://www.crcworks.org/fffc.pdf>.

To read the original *Finding Food in Farm Country* study from Southeast Minnesota (written for the Experiment in Rural Cooperation): <http://www.crcworks.org/ff.pdf>.

To view a PowerPoint presented by Ken Meter at a keynote appearance to the Minnesota Rural Partners Summit in July, 2005: <http://www.crcworks.org/metersummit05.pdf>.

To link to further analysis of farm and food economies in the U.S.:

<http://www.crcworks.org/rural.html>.

Contact Ken Meter at Crossroads Resource Center

<kmeter@crcworks.org

A Market Analysis
of the
Tailgate Farmers Markets of
Buncombe and Madison Counties

Prepared for

The Appalachian Sustainable
Agriculture Project

The Richard L. Hoffman

Center for Assessment and

Research Alliances

at Mars Hill College

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Section 1: Executive Summary

Over the summers of 2003 and 2004, more than fourteen hundred surveys were conducted with customers at farmer's tailgate markets in Buncombe and Madison Counties.

The markets where customers were surveyed are:

- North Asheville Tailgate Market (NAV)
- French Broad Food Co-op Saturday Market (FBFC-S)
- French Broad Food Co-op Wednesday Market (FBFC-W)
- Tailgate Market at La Catarina Restaurant (LaC, now located at Greenlife Grocery)
- West Asheville Tailgate Market (WAV)
- Madison County Tailgate Market (MAD)
- Black Mountain Tailgate Market (BM)

This report summarizes findings about customers who shop at these markets, including per capita spending, demographic characteristics, attitudes and perceptions towards local food, and general awareness of the "buy local" campaign led by the Appalachian Sustainable Agriculture Project (ASAP). Research shows that tailgate markets in the greater Asheville area are now well-established parts of the local food distribution system, and their continued success and growth is likely.

Tailgate markets are supported by a loyal base of steady repeat customers. Based on customer counts, more than 2,000 customers shopped at these markets on any given week in the summers of 2003 and 2004. Of that number, 46% are believed to shop at the markets every week, with another 20% shopping at the markets every two weeks.

These markets have significant economic impact to the regional economy. Per capita expenditures averaged \$14.18 across both years. At the four markets located within Asheville city limits, the cumulative average weekly sales total during tracking periods in 2003 and 2004 is estimated at \$24,120. The total sales at these markets during June, July and August is estimated at over \$300,000 per year.

The markets also have significant economic impact to the specific communities where they are located. At the Asheville city markets, a significant number of shoppers indicated that the markets brought them to town that day, and resulted in their doing additional shopping in the area. These shoppers spent an additional \$14,740 at other businesses in the area on a weekly average. This represents \$191,620 in additional economic activity for the city of Asheville during the summer months.

These markets are growing in customer support. Per capita expenditures increased from \$13.41 in 2003 to \$15.01 in 2004, a 12% annual increase. Customers purchasing over \$20 accounted for 37.6% of all dollars spent in 2003 and increased to 55.4% of all dollars spent in 2004. The percentage of weekly shoppers spending more than \$20 at the markets increased from 24% in 2003 to 36% in 2004. Across all markets, on any given day 17.7% of shoppers were visiting the

market for the first time. From 2003 to 2004, the number of first-time shoppers at Asheville city markets increased from 15% of total shoppers to 19.9% of total shoppers, a nearly 25% increase.

Tailgate market shoppers are well aware of the local food marketing efforts headed by ASAP. Survey responses tend to infer that ASAP efforts have led to a greater awareness of local food issues and have resulted in increased spending on local food. Results show a very high recognition of the Local Food Guide at 65.8% across both years. From 2003 to 2004, market shopper awareness of the Local Food Guide rose from 62.3% to 71.5%.

Among those familiar with the Guide, 53.4% of respondents said they had used it to find local food or farms. 14% of those familiar with the Guide had used the web-based version of the Guide, and 88% of those respondents said they had used the Guide to find local food or farms. Of those who had seen or heard anything about locally-grown food in the past year, 55.7% said it had resulted in their increasing purchases of locally-grown food.

91.3% of tailgate shoppers said they had seen or heard about locally-grown food in the past year. The Local Food Guide, bumper stickers, and the Mountain Xpress weekly newspaper were the most well-known sources of information on locally-grown food.

When asked what they liked most about the markets, customers overwhelmingly indicated that they enjoy the markets as community social events. In addition to enjoying the products offered, customers said they like meeting friends, supporting local farmers, and listening to live music.

Some of the most important findings of this research include the following:

- 1) Tailgate markets are successful primarily due to loyal repeat customers.
- 2) A relatively high percentage of first-time shoppers come to the market each week.
- 3) The majority of shoppers at any one market live within five miles of that market.
- 4) Market shoppers get most of their information about markets through personal contacts, local print media, and passing by.

A few basic marketing strategies seem apparent from these findings, as follows:

- 1) Marketing should strive to increase per capita expenditures among the customer base that is already aware of the markets and what they have to offer.
- 2) Marketing should also strive to increase frequency of attendance from those shoppers who may only occasionally come to the market.
- 3) Concentrated non-traditional marketing in the immediate areas around markets may serve to increase market attendance and introduce new buyers to the market experience.
- 4) Over 60% of tailgate market shoppers are women. Advertising and outreach that specifically targets women may pay off better than marketing towards men.

Section 2: Introduction

Appalachian Sustainable Agriculture Project (ASAP) is a non-profit organization that supports farmers and rural communities in the mountains of western North Carolina and the southern Appalachians. ASAP's mission is to create and expand regional community-based and integrated food systems that are locally owned and controlled, environmentally sound, economically viable and health-promoting. Their vision is a future food system throughout the mountains of North Carolina and the southern Appalachians that provides a safe and nutritious food supply for all segments of society; that is produced, marketed and distributed in a manner that enhances human and environmental health; and that adds economic and social value to rural and urban communities.

Over the summers of 2003 and 2004, ASAP staff, with support from the Mountain Tailgate Market Association (MTMA) and the Center for Assessment and Research Alliances at Mars Hill College (CARA) conducted surveys of customers at six farmer's tailgate markets in Buncombe and Madison Counties. A total of 694 valid written customer surveys were gathered in 2003 and 2004. In addition, 732 rapid-response "dot surveys" were conducted in 2003 at six markets to gauge effective marketing strategies and customer habits.

Using data gathered from customer survey responses, this report summarizes findings on economic impact of the markets cumulatively, including per capita spending of customers, demographic characteristics of customers, customer attitudes and perceptions towards local food, and general awareness and economic impact among tailgate market customers of the "buy local" campaign led by ASAP during that time. Comparisons between markets and between 2003 and 2004 findings are included.

Data from seven markets are studied for this report, reflecting differences in market size, length of establishment, and geographical distribution. These markets are:

- North Asheville Tailgate Market (NAV)
- French Broad Food Co-op Saturday Market (FBFC-S)
- French Broad Food Co-op Wednesday Market (FBFC-W)
- Tailgate Market at La Catarina Restaurant (LaC, now located at Greenlife Grocery)
- West Asheville Tailgate Market (WAV)
- Madison County Tailgate Market (MAD)
- The Black Mountain Tailgate Market (BM)

The Madison County Market was only surveyed in 2003, and the La Catarina Market was only surveyed in 2004. The Black Mountain Market was only surveyed using rapid response dot surveys in 2003. Results from these markets are not included in year-to-year data comparisons.

Section 3: A Brief History of Tailgate Markets in the Region

Tailgate markets are an outgrowth of roadside produce stands. Even today, in summer months one can often find individual farmers, hobbyist gardeners, or resellers parked on the side of a country road, usually with a crude wooden or cardboard sign advertising availability of fresh produce such as corn, tomatoes and squash. The tailgate market is an expansion of that theme, where multiple producers congregate to sell their produce. Early 20th Century tailgate markets were ad hoc affairs where farmers congregated for company while spending a Saturday morning or Wednesday afternoon waiting for customers to stop and buy. Vendors discovered that by pooling their produce for sale at one location, more customers stopped regularly to buy more individually due to a steady availability and increased variety of produce for sale. The increased traffic more than outweighed the presence of potential competitor vendors.

In the 1970s, farmer's markets of all types began to grow nation-wide.¹ Farmer's markets of all types increased from 342 in 1970 to 1,890 in 1989. The 2004 Directory of Farmers Markets listed 3,700 farmer's markets of all types.

In 1979, two Asheville area farmers, Ron Ainspan and Ernie Thurston, attended a statewide meeting hosted by the North Carolina Agricultural Marketing Project to learn how to set up tailgate markets. They established the first modern tailgate market in Asheville on July 18, 1980, with 10 vendors at the Westgate Shopping Center in West Asheville. Shortly thereafter the market moved to Merrimon Avenue and became the North Asheville Tailgate Market. In 2000 the market moved to its current location on a paved lot behind the Asheville Pizza and Brewing Company.

In the 1980s and 1990s, as the North Asheville Tailgate Market grew in popularity, and as more farmers became interested in tailgate sales, other markets were formed. The French Broad Food Co-op supported the development of markets in its parking lot on Saturday mornings and Wednesday afternoons. Additional markets in the area have now been established in Buncombe County communities of Black Mountain, Weaverville and West Asheville, in Madison County in Mars Hill, and in Yancey County in Burnsville. ASAP's Local Food Guide now lists 35 tailgate markets in 24 counties in western North Carolina.

In 2002, ASAP led efforts to establish the Mountain Tailgate Market Association (MTMA), an organization originally made up of 9 farmer and vendor only markets in Buncombe and Madison Counties. Through direct grant support from the Southern Region Sustainable Agriculture Research and Education Program (SARE) and through ASAP support from the USDA and the North Carolina Tobacco Trust Fund, the MTMA has developed marketing campaigns, logos, professional signage, and professional research and analysis to develop increased economic opportunities for the approximately 150 vendors that participate in MTMA tailgate markets.

¹ Information on tailgate market history is gathered from the Asheville Citizen-Times article of August 17, 2005, "For 25 years, farmers and neighbors have gathered at the North Asheville Tailgate Market," by Arnold Wengrow.

Section 4: Customer Survey Methodology and Analysis

694 valid written surveys were administered in 2003 and 2004 at six tailgate markets. Slight variations were made among survey instruments in 2003, with additional questions included in the 2004 survey. Surveyors were instructed to note the year, month, market location, and weather conditions for each administration. The following questions were asked in surveys for both 2003 and 2004:

- How did you find out about this market?
- How many miles away from the market do you live?
- How often do you shop at this market?
- Do you also shop at other tailgate markets? If so, where?
- How much money did you, or will you, spend today at the market?
- Is the farmer's tailgate market the primary reason you came into town today?
- Do you plan to do any additional shopping in the area today? If so, how much will you spend?
- Are you familiar with either of the following guides? Local Food Guide, published by the Appalachian Sustainable Agriculture Project (**asked in 2003 and 2004**), and Farms, Gardens, and Countryside Trails of Western North Carolina, published by HandMade in America (**asked in 2003 only**)?
- What would you do to improve the market?
- What do you like best about the market?

In 2004, the sex of respondents was noted by the surveyors. The following additional questions were included in 2004 surveys:

- What local media sources do you consult most often?
- Have you seen or heard anything about locally-grown food in the past year? If so, where? Has it increased your purchases of locally-grown food? If so, can you estimate what percentage it has increased?
- What is your biggest barrier to purchasing locally-grown food?
- Are you familiar with the Local Food Guide (**asked in 2003 and 2004**)? 2004 only follow-up questions were: Have you used it to find local food or farms? Have you used the web version of the Guide?
- Is local food an important consideration when you choose a restaurant or grocery store?

In addition to written customer surveys, 732 rapid-response "dot surveys" were conducted in 2003 at six markets. These surveys were administered using large flip charts posing five questions. For each question, tailgate customers were asked to place a dot sticker in the response category that they most agreed with. The questions asked were:

- Of the promotions you have seen or heard for tailgate markets, which is most memorable?
- How did you first find out about this market?
- How much did you, or will you, spend at the market today?
- How many miles away from this market do you live?

-How often do you shop at this tailgate market?

Finally, ASAP staff conducted customer counts at tailgate markets to arrive at a valid estimate of the total number of people that shopped on selected days in May, June, and July, 2003 and in July and August, 2004. This process involved getting an accurate and complete arrival count of customers for a ten-minute period during every hour of the given market's operation.

Multiplying each-ten minute count by six gave a reasonable estimate of the number of customers arriving at the market during that given hour. According to ASAP staff, comparisons between the ten-minute count method and counting all shoppers in a full hour consistently showed the ten-minute method to be accurate within 5% of the true count. Cumulative figures for all hours of operation arrived at an estimate of total customer attendance for the entire day.

Survey results were analyzed to address six broad subject areas:

- 1) What are the economic impacts of tailgate markets in the region, and how do they impact other economic activity in the area?
- 2) What are key demographic characteristics of tailgate market customers and how do they affect buying habits at tailgate markets?
- 3) How aware are tailgate market customers of ASAP's "buy local" campaign and how has that campaign impacted sales at tailgate markets?
- 4) What factors are important among tailgate customers when buying local food?
- 5) What media sources are most effective in informing buyers of the local food option?
- 6) What marketing strategies will be most beneficial to increasing sales at tailgate markets in the future?

Aggregate data from 2003 is gathered from a sufficiently large sample population of tailgate customers to meet a margin of error within plus or minus five percent, with a 95% confidence level. Sub-category analysis and results from 2004 have higher margins of error due to limited sampling. While statistical validity of some responses is questionable, data serves as a clear guide on market behavior to sufficiently inform decision makers for future marketing efforts.

Section 5: Economic Impacts of the Tailgate Markets

The key written survey questions asked for this category were:

- How much money did you, or will you, spend today at the market?
- Is the farmer's tailgate market the primary reason you came into town today?
- Do you plan to do any additional shopping in the area today? If so, how much will you spend?

Results from the questions above are correlated to total customer attendance, using the customer count methodology explained in Section 4 above, Customer Survey Methodology and Analysis. Analyzing customer counts at BM, FBFC-S, FBFC-W, MAD, NAV, and WAV, more than 2,000 customers frequented these markets on any given week in the summer months of 2003 and 2004.

Per Capita Expenditures

Two sets of data give guidance on how much tailgate market customers spend. The written surveys administered over 2003 and 2004 received 666 responses to the question regarding how much the customer spent:

Fig 5.1 How much money did you, or will you, spend today at the market?

	Frequency	Valid Percent
\$0-5	99	14.9
\$6-10	185	27.9
\$11-15	112	17.0
\$16-20	123	18.5
\$21-30	105	15.8
\$31-40	20	3.0
\$40+	20	3.0
Total	664	100.0

The rapid response dot surveys administered in 2003 received 728 responses to the same question, but with different expenditure categories and at different markets. Expenditure categories for dot surveys were in ten-dollar increments as opposed to five-dollar increments with written surveys. When analyzed by individual markets, dot survey responses closely matched written survey responses in all but a few instances which will be discussed in sections on individual markets.

Using the written surveys for all markets across both years, the estimated per capita customer expenditure is \$14.18. This figure was arrived at by multiplying the valid percentages of each dollar range category in Figure 5.1 above by the midpoint average of each dollar category as follows:

Fig 5.2 Determining Per Capita Expenditures

\$ Category Average	X	Number of total Respondents	=	
\$2.5	X	99	=	247.5
\$7.5	X	185	=	1387.5
\$12.5	X	112	=	1400
\$17.5	X	123	=	2152.5
\$25	X	105	=	2625
\$35	X	20	=	700
\$45	X	20		900
Total		664		9412.5

For the highest dollar category of \$40+, a conservative estimate of \$45 for an average expenditure was used. Dividing the total in the right hand column by the total of 664 respondents arrives at a per capita rounded expenditure of \$14.18.

In terms of purchases, the most significant category of shoppers was those spending in the \$20 to \$30 range, representing 27.9% of all dollars spent. All customers spending more than \$20 at the markets represented only 21.8% of the entire number of shoppers. However, their purchases represented 44.8% of total dollars spent.

Fig 5.3 Percentage of customers by purchasing amounts

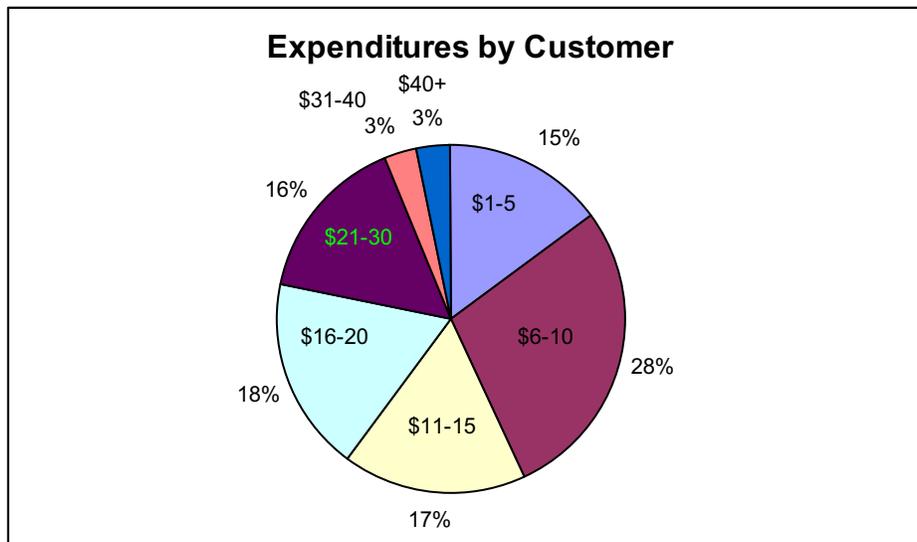
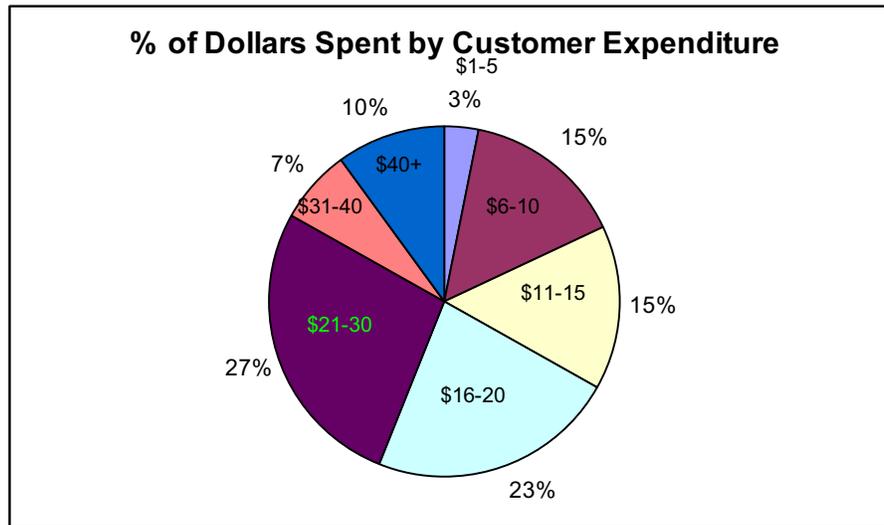


Fig 5.4 Percentage of dollars spent by customer expenditure



2003 vs. 2004 Sales Values

For cross-year comparisons, only those markets that were surveyed both years were included in the data, which were WAV, NAV, FBFC-W, and FBFC-S. In comparing purchasing data between years, a significant increase in per capita expenditures was found from 2003 to 2004.

Fig 5.5 How much money did you, or will you, spend today at the market? * 2003 vs. 2004

			year	
How much money did you, or will you, spend today at the market?			2004	2003
	\$0-5	% within year	18.7%	14.2%
	\$6-10	% within year	23.7%	28.9%
	\$11-15	% within year	13.2%	19.2%
	\$16-20	% within year	16.0%	19.7%
	\$21-30	% within year	20.5%	13.9%
	\$31-40	% within year	2.7%	2.8%
	\$40+	% within year	5.0%	1.3%
	Total		100.0%	100.0%

Purchasing comparisons from 2003 to 2004 clearly demonstrate increased per capita economic activity. While the percentage of customers purchasing \$10 or less remained almost constant, those purchasing more than \$20 increased from 18% to 29%, and those purchasing in the \$11 to \$20 range fell from 39% to 29%. This may indicate that buyers in this mid-range category in 2003 became increasingly willing to spend more than \$20 the following year. In addition, the percentage increase of shoppers spending \$5 or less may be due to a larger number of first-time shoppers at the markets in 2004, as will be shown in Section 6 below.

Using the formula in Fig 5.2 above on an annual basis, per capita purchases increased from \$13.41 in 2003 to \$15.01 in 2004, a 12% annual increase.

Customers purchasing over \$20 accounted for 37.6% of all dollars spent in 2003 and increased to 55.4% of all dollars spent in 2004. For both years, the single largest category of purchases in terms of all dollars spent was in the \$20 to \$30 range. However, that category rose from 26% of all dollars spent in 2003 to 34% in 2004.

At the highest end of the purchasing spectrum, buyers spending more than \$40 at the market rose from 1% to 5% of the total number of buyers in each year. In dollar figures this category represented 4% of total dollars spent in 2003; in 2004 that rose to 15%.

Economic Activity, July 9-19 2003

In 2003 ASAP staff used a rapid response survey method to estimate the total number of customers shopping at certain markets. An estimated number of shoppers were determined for a full day in July at WAV, FBFC-S, FBFC-W, and NAV. Using cross tabulations of customer survey responses about expenditures at each market on the same days, the following economic activity was measured:

Fig 5.6 Market Economic Activity, July 9-19, 2003

Market/Date	Customers	Avg. Customer Expenditure	Total Market Expenditure	# of Vendors	Vendor Average Sales
WAV 7/9/03	280	\$11.87	\$ 3,323.60	14	\$237.40
FBFC-S 7/12/03	366	\$13.32	\$ 4,875.12	10	\$487.50
FBFC-W 7/15/03	528	\$10.67	\$ 5,633.76	15	\$375.58
NAV 7/19/03	720	\$15.74	\$11,332.80	27*	\$419.73
Totals	1894	\$13.29	\$25,165.28	66	\$381.29

Note: 245 actual customers were surveyed during this time, with a cumulative sampling margin of error of plus or minus 6%.
* Estimate

Economic Activity, July 21-July 31, 2004

In 2004 ASAP staff again used a rapid response survey method to estimate the total number of customers shopping at certain markets. An estimated number of shoppers were determined for full market days in July at WAV, FBFC-S, NAV, and at FBFC-W. Using the same methodology as in Fig 5.6 above, the following economic activity was measured:

Fig 5.7 Market Economic Activity, July 21-31, 2004

Market/Date	Customers	Avg. Customer Expenditure	Total Market Expenditure	# of Vendors	Vendor Average Sales
WAV 7/28/04	258	\$11.78	\$ 3,039.24	8	\$379.90
FBFC-S 7/31/04	293	\$15.67	\$ 4,591.31	11	\$417.39
FBFC-W 7/21/04	384	\$13.63	\$ 5,233.92	18	\$290.77
NAV 7/24/04	640	\$15.90	\$10,207.80	27	\$378.06
Totals	1577	\$14.63	\$23,072.27	64	\$360.50

Note: 154 actual customers were surveyed during this time, with a sampling margin of error across all markets of plus or minus 7.5%.

Across these four markets, per capita customer expenditures rose \$1.36, or just over 10%. However, customer counts were lower in 2004 by 17%. This may indicate a difference in shopping patterns between the first and second halves of the month. Many shoppers tend to be freer with their dollars early in the month if they have jobs paying on a month-to-month basis.

The cumulative average weekly sales total at these four markets during the tracking periods in 2003 and 2004 is estimated at \$24,120. Using this figure as a weekly average, the total sales at these markets during June, July and August is estimated at over \$300,000 per year.

Ancillary Economic Impacts

Tailgate customers were queried about whether the markets were their primary reasons for coming to town that day, whether they would do additional shopping elsewhere in the area, and if so how much they expected to spend. Using these responses, we attempt to draw some conclusions on how much ancillary economic impact the markets contribute to the region. 65.5% of all survey respondents said the market was their primary reason for coming to town.

Fig 5.8 Is the farmers' tailgate market the primary reason you came into town today?

		Frequency	Valid Percent
Valid	Yes	438	65.5
	No	231	34.5
	Total	669	100.0

57.8% of respondents said they planned to do additional shopping in the area that day:

Fig 5.9 Do you plan to do any additional shopping in the area today?

		Frequency	Valid Percent
Valid	Yes	369	57.8
	No	269	42.2
	Total	638	100.0

Over 30% of those planning to do additional shopping the area expected to spend more than \$40:

Fig 5.10 If so, how much will you spend?

	Frequency	Valid Percent
\$0	1	.3
\$0-5	37	12.2
\$6-10	52	17.2
\$11-15	19	6.3
\$16-20	36	11.9
\$21-30	48	15.8

\$31-40	18	5.9
\$40+	92	30.4
Total	303	100.0

34% of all survey respondents said that the market was both their primary reason for coming to town that day and they intended to do additional shopping in the area. From Figure 5.11 below and using the weighted mean of each expenditure category as per calculations above, the estimated per capita expenditure of this group of respondents at locations near the market is \$22.89. When applied to the 2003 market customer count of July 9-19, shoppers at Asheville tailgate markets who, had the market not been open, might not otherwise have shopped in the area that day, spent an additional \$14,740 at other businesses in the area. If taken as an average weekly expenditure for June, July and August, this represents \$191,620 in additional economic activity for the city of Asheville during that three month period.

Fig 5.11 If so, how much will you spend? Do you plan to do any additional shopping in the area today? Is the farmers' tailgate market the primary reason you came into town today? Crosstabulation

Is the farmers' tailgate market the primary reason you came into town today?	Additional Area Shopping Planned	% Response
Yes	\$0	.5%
	\$0-5	13.0%
	\$6-10	18.1%
	\$11-15	6.7%
	\$16-2	13.0%
	\$21-30	15.5%
	\$31-40	6.7%
	\$40+	26.4%

Section 6: Characteristics of Tailgate Market Customers

Limited demographic data on tailgate market customers were gathered in the surveys. However, survey results show the following general facts:

Gender

In 2004, 65.7% of respondents were female;

Fig. 6.1 Gender

		Frequency	Valid Percent
Valid	Male	66	28.3
	Female	153	65.7
	Couple	14	6.0
	Total	233	100.0

In addition to being a numerical majority, women tended to spend more at the markets on a per capita basis. 49.2% of men spent \$10 or less at the markets, as compared to 38.8% of women. However, women and men spending more than \$20 at the markets were roughly equal, at 29.9% of women and 28.6% of men.

Fig 6.2 How much money did you, or will you, spend today at the market? Gender Crosstabulation

	Gender	
	Male	Female
\$0-5	28.6%	11.6%
\$6-10	20.6%	27.2%
\$11-15	11.1%	13.6%
\$16-20	11.1%	17.7%
\$21-30	23.8%	19.7%
\$31-40	1.6%	4.8%
\$40+	3.2%	5.4%
	100.0%	100.0%

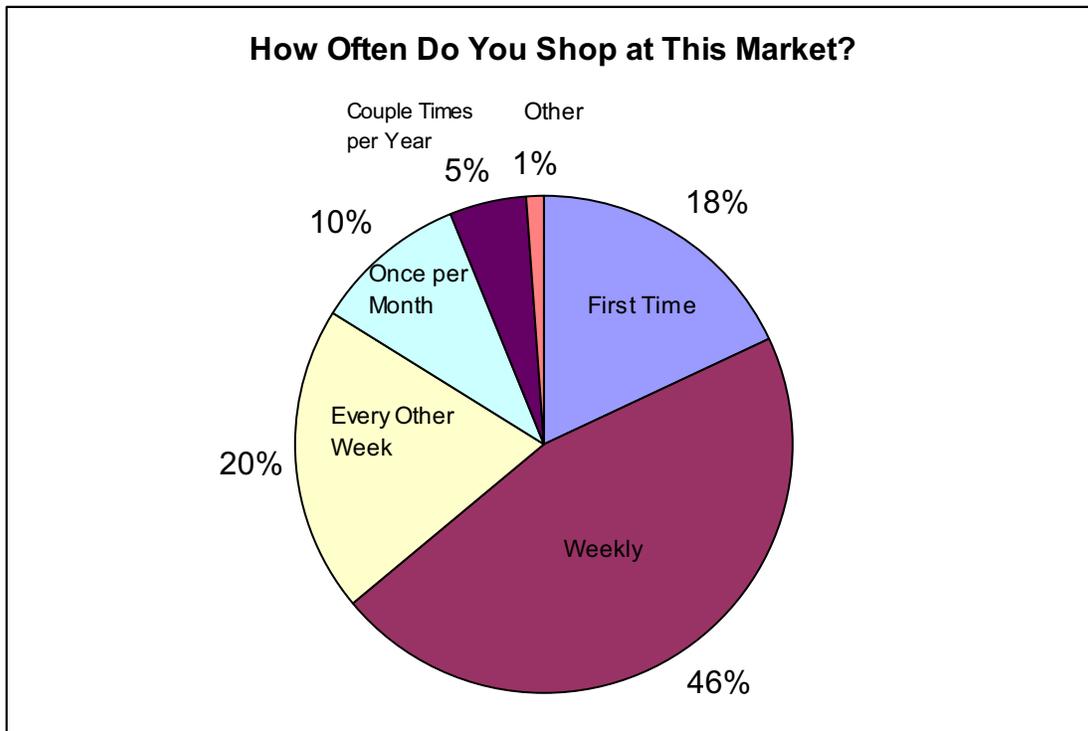
Distance Traveled

Over both years, 65% of respondents lived five miles or less from the markets they shop. 19.2% lived more than 10 miles away from the markets they shop; 5% were visitors.

Frequency of Attendance

Of 674 respondents at all markets over both years, 46.1% shop at the market weekly. 19.9% shop at the market every 2 weeks. These findings indicate that the markets enjoy a solid core of loyal customers. 119 respondents (17.7%) were visiting the market for the first time.

Fig. 6.3 How often do you shop at this market?



A comparison of purchasing habits between first time shoppers, weekly shoppers, those who shop every other week, and those who shop monthly shows a strong correlation between regular tailgate market attendance and increased per capita expenditures (Fig 6.4 below). 28.1% of weekly shoppers spent more than \$20. Of those shopping every other week, 24.1% spent more than \$20. Among monthly shoppers the percentage was 13.4%.

Fig 6.4 How much money did you, or will you, spend today at the market? * 4. How often do you shop at this market? Crosstabulation

Dollars Spent	How often do you shop at this market?			
	First Time	Weekly	Every 2 Weeks	Once a Month
\$0-5	29.6%	9.6%	11.3%	16.4%
\$6-10	33.3%	22.4%	32.3%	34.3%
\$11-15	8.3%	18.2%	18.8%	19.4%
\$16-20	17.6%	21.8%	13.5%	16.4%
\$21-30	8.3%	20.5%	17.3%	10.4%
\$31-40	1.9%	4.0%	3.0%	1.5%
\$40+	.9%	3.6%	3.8%	1.5%
Total	100.0%	100.0%	100.0%	100.0%

2003 vs. 2004 Comparisons

A same-market comparison of shopping frequency between years shows a 4.9% increase of first-time shoppers as a percentage of all shoppers from 2003 to 2004. This probably contributes to a decrease of weekly shoppers as a total percentage of all shoppers from 49.1% in 2003 to 44.8% in 2004.

Fig 6.5 How often do you shop at this market? 2003 vs. 2004 Same-Market Comparison

How often do you shop at this market?	year		Total
	2004	2003	Both Years
First Time	19.9%	15.0%	16.8%
Weekly	44.8%	49.1%	47.6%
Every 2 Weeks	18.6%	19.8%	19.4%
Once a Month	12.2%	8.5%	9.8%
A Couple of Times a Year	4.1%	6.8%	5.8%
% within year	100.0%	100.0%	100.0%

Weekly Shoppers

Weekly shoppers are the most economically significant demographic at the tailgate markets. When compared between the same markets over both years, 47.6% of all shoppers identified themselves as weekly shoppers. In cross-tabulation of purchasing habits, these shoppers showed a measurable increase in economic activity from 2003 to 2004:

Fig 6.6 How often do you shop at this market? How much money did you, or will you, spend today at the market? * year Crosstabulation

Year		\$0-5	\$6-10	\$11-15	\$16-20	\$21-30	\$31-40	\$40+	
2004	Weekly	11.3	18.6	14.4	19.6	24.7	6.2	5.2	100.0
2003	Weekly	9.4	23.6	20.4	22.5	19.4	3.1	1.6	100.0

The percentage of weekly shoppers spending more than \$20 at the market increased from 24% in 2003 to 36% in 2004, while those spending \$10 or less decreased from 33% in 2003 to 30% in 2004.

First Time Shoppers

First time shoppers are important for growing the markets’ consumer base. Looking at data from WAV, NAV, FBFC-S, and FBFC-W (all markets that were more than one year old when surveying began) 16.8% of all shoppers were there for the first time.

A comparison with weekly shoppers shows that first time shoppers tend to travel from farther away to shop at the markets, with 18.1% of first time shoppers being visitors to the region. Fifty-three point four percent of first time shoppers traveled more than 5 miles to come to the market, compared to 24.2% of weekly shoppers.

Fig 6.7 How often do you shop at this market? * How many miles away from the market do you live? Crosstabulation

How often do you shop at this market?	2. How many miles away from the market do you live?						Total
	0-2 Miles	3-5 Miles	6-10 Miles	11-15 Miles	16-50 Miles	Visiting	
First Time	22.4%	24.1%	22.4%	2.6%	10.3%	18.1%	100.0%
Weekly	46.1%	29.7%	12.3%	6.8%	4.5%	.6%	100.0%

First time shoppers also spent far less at the market than other groups. Figure 6.4 above shows that 62.9% of first timers spent \$10 or less at the market.

When asked how they found out about the market, first time shoppers at the four markets closely followed all other shoppers, with 64.4% of first timers hearing about the market either through word of mouth or passing by.

Shopping at Other Markets

Respondents were asked if, in addition to the market where they were interviewed, they shopped at other tailgate markets. Of all 694 survey respondents, the percentages who shopped at another identified market in this study were (by secondary markets):

Fig 6.8 What Other Markets Do You Shop At?

FBFC-S:	13.3%
FBFC-W:	15.4%
NAV:	13.3%
WAV:	8.2%
MAD:	0.7%
BM:	1.4%

Cross-tabulation of this question with individual market responses indicates a strong relationship between shoppers at the two French Broad Food Co-op Markets and the North Asheville Market. Habitual customers quite often shop at more than one of these markets.

A Note on the Weather

503 surveys were administered in weather conditions that were either sunny or partly cloudy. Cross-tabulation of purchasing habits with weather conditions indicates a difference in per capita purchasing between cloudy and sunny conditions. In cloudy conditions, 16.9% of shoppers spent more than \$20, while in sunny conditions 23.3% of shoppers spent more than \$20. In partly cloudy conditions 25.4% of shoppers spent more than \$20. In only eight cases did respondents answer during rainy conditions, all of which were administered at WAV in October 2003. None of those respondents spent more than \$20.

Section 7: ASAP Marketing Efforts and Tailgate Market Consumer Attitudes Towards Local Food

2003 and 2004 surveys asked specific questions about tailgate buyers’ awareness of local food issues, media sources they consult, the ASAP marketing campaign, and the ASAP Local Food Guide.

The Local Food Guide

Results show a very high recognition of the Local Food Guide (the Guide) at 65.8% across both years. From 2003 to 2004, market shopper awareness of the Guide rose from 62.3% to 71.5%:

Fig 7.1 Are you familiar with the Local Food Guide? With Year to Year Comparison

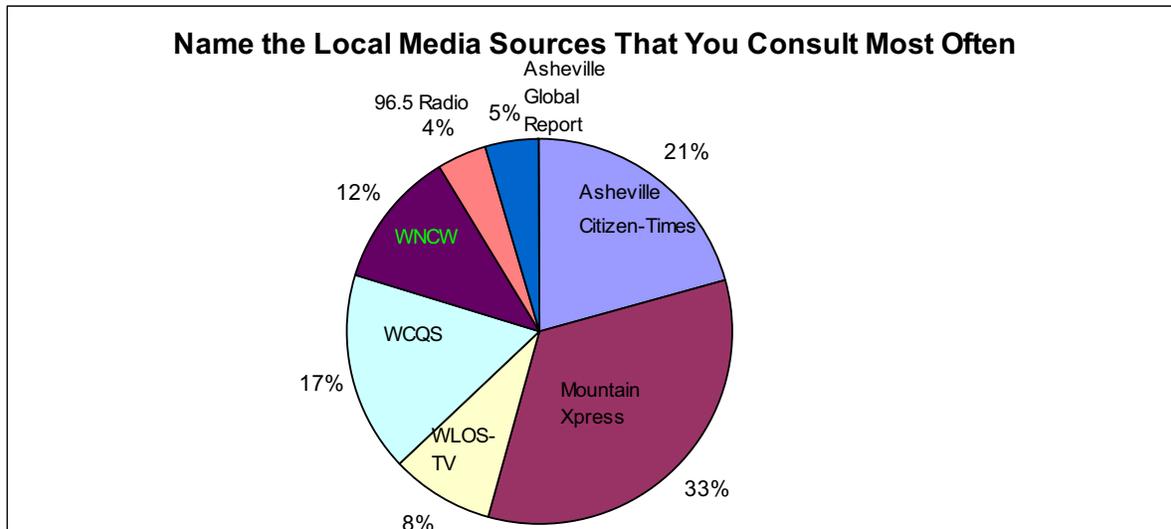
			Yes	No	
year	2004	% within year	71.5%	28.5%	100.0%
	2003	% within year	62.3%	37.7%	100.0%
Total Count All Years			65.8%	34.2%	100.0%

Among those familiar with the Guide, 53.4% of respondents said they had used it to find local food or farms. 14% of those familiar with the Guide had used the web-based version of it, and 88% of those respondents said they had used the Guide to find local food or farms.

Media Sources

Respondents were asked, “Name the local media sources that you consult most often, and be specific.” 289 respondents answered with at least one identified media sources as follows:

Fig 7.2 Name the local media sources that you consult most often, and be specific.



The Mountain Xpress and the Asheville Citizen-Times combined for a total of 54% of all answers, with local radio station WCQS pacing a distant third at 17%. Spindale’s WNCW radio registered 12% of answers. These findings bode well for advertising expenditures, as the most affordable advertising is available from some of the most often consulted sources. Television advertising on WLOS-TV, while by far the most expensive, is also one of the least consulted media outlets.

Media Awareness

Tailgate shoppers are very aware of media reports on local food. Of 254 people in 2004 who responded to the question on whether they have seen or heard anything about locally-grown food in the past year, 91.3% answered in the affirmative. Respondents were then asked where they had heard about local food with the following responses (totals exceed 100% due to multiple responses):

**Fig 7.3 Have you seen or heard anything about locally-grown food in the past year?
Breakdown of “yes” responses**

News:		68 or 26.8%
<u>Break-out of above category (percentages are of total responses)</u>		
	Mountain Xpress:	27 or 10.6%
	Newspapers (general):	13 or 5.1%
	News (general)	16 or 6.3%
	Citizen-Times:	6 or 2.3%
	Media (general)	3 or 1.2%
Local Food Guide:		46 or 18.1%
Did not specify:		39 or 15.3%
Bumper Stickers:		28 or 11%
Friends/Word of Mouth:		20 or 7.9%
French Broad Food Co-op:		20 or 7.9%
Farmers Markets:		19 or 7.5%
Advertisements:		13 or 5.1%
Earthfare:		13 or 5.1%
All Over/Everywhere:		11 or 4.3%
Internet:		7 or 2.7%
Radio:		7 or 2.7%
Farmers:		5 or 2%
TV:		3 or 1.2%
New Life Journal:		3 or 1.2%

Over 50% of responses can be attributed at some level to ASAP marketing efforts. Of 299 responses in the above categories, ASAP efforts were directly responsible for 24.7% of responses (the Local Food Guide and the bumper stickers), while ASAP marketing efforts contributed significantly to another 32.7% of response categories (news, advertisements, internet, radio, and TV).

Learning About the Market

When asked “How did you first find out about this market,” 508 individuals responded as follows:

Fig 7.4 How Did You First Find Out About This Market?

Word of Mouth	29.4%
Passing By	29.4%
French Broad Food Co-op	11.3%
Newspaper	10.6%
Can't Remember	7.2%
Other	3.3%
Road Signs	2.4%
Local Food Guide	2.4%
Magazine	.7%
Radio/TV	.4%
Website	.3%

The findings strongly indicate that knowledge of the markets comes from unstructured, largely noncommercial sources. Only 14.4% of customers at the markets found out about them through formal media sources (newspaper, the Local Food Guide, magazines, radio/TV, the Internet), with newspapers far outperforming the others at 10.6%. Across all markets, the French Broad Food Co-op was more effective about informing customers of the markets than newspapers. However, only 2.9% of shoppers at markets other than FBFC-S and FBFC-W indicated the co-op as where they first heard about the market.

Of those who had seen or heard anything about locally-grown food in the past year, 55.7% said it had resulted in their increasing purchases of locally-grown food. 102 respondents gave an estimate of their percentage increase in local food purchases with the following breakdown by category:

Fig. 7.5 Percentage increase in purchases of local food by shoppers who had heard about local food in the past year and who had said they increased their purchases because of it.

<u>% increase</u>	<u>% of respondents</u>
10-20	35.2%
25-40	21.5%
50%	19.6%
70-90	7.8%
100%	8.8%

Barriers to Purchasing Local Food

In 2004, 247 respondents replied to the open-ended question, “What is your biggest barrier to purchasing locally-grown food?” Barriers mentioned most often had to do with access, availability, and market hours. Specific percentages were as follows:

Fig. 7.6 What is your biggest barrier to purchasing locally-grown food?

Access & Availability:	24.7%
No barrier:	23.5%
Price:	20.6%
Convenience	9.3%
Market Hours:	7.2%

There was substantial overlap with multiple responses on the issues of access, availability, convenience, and market hours. Several respondents also said that most grocery stores don’t carry local food, and that having the market only once per week was a limiting factor. Many also said that the limited growing season was a barrier to buying more local food in the off-season.

In 2004 customers were also asked if local food was a consideration when choosing a restaurant or a grocery store. An overwhelming majority said yes.

Fig 7.7 Is local food an important consideration when you choose a restaurant or grocery store?

		Frequency	Valid Percent
Valid	Yes	215	85.3
	No	37	14.7
	Total	252	100.0

Section 8: Recommendations for Future Action

Survey respondents were asked two questions that can help inform market organizers on improving the tailgate market experience:

- What would you do to improve the market?
- What do you like best about the market?

Across all markets, respondents overwhelmingly stated that they enjoy the sense of community present at the markets, as well as their ability to support local producers when shopping there. For improving the markets, many respondents recommended increasing the number of vendors and variety of products, improving availability of parking, and increasing road signage.

Marketing Recommendations

To increase economic activity and opportunity at the markets, ASAP and the MTMA may consider some of the following key factors:

- **Tailgate markets are successful primarily due to loyal repeat customers.** Weekly and bi-weekly shoppers are responsible for well over 50% of all dollars spent at the market. The more frequently a customer shops at the market, the more they tend to spend on each visit.
- **A relatively high percentage of first-time shoppers come to the market each week.** While these customers do not tend to spend very much as first time shoppers, research indicates that they will steadily increase per capita expenditures if they continue to come back.
- **The majority of shoppers at any one market live within five miles of that market.** Tailgate markets are neighborhood community events; their role as a neighborhood social venue likely adds to the shopping experience.
- **Market shoppers get most of their information about markets through personal contacts, local print media, and passing by.** Advertising efforts should be tailored to meet the largely informal information networks that market shoppers rely on.

A few basic marketing strategies seem apparent from these findings, as follows:

- 1) Marketing should strive to increase per capita expenditures among the customer base that is already aware of the markets and what they have to offer. Comparisons of 2003 and 2004 data strongly suggest that frequent shoppers increased per capita expenditures, with many buyers moving from per capita spending in the \$16 to \$20 range to over \$20 per visit. Market organizers and ASAP may want to consider “frequent buyer” promotions that offer discounts or rebates to shoppers spending more than \$20 on a visit;
- 2) Marketing should also strive to increase frequency of attendance from those shoppers who may only occasionally come to the market. Again, the more often buyers shop, the more they tend to spend on each visit. The same marketing suggestions above may also help to increase regular attendance;
- 3) Concentrated non-traditional marketing in the immediate areas around markets may serve

to increase market attendance and introduce new buyers to the market experience. Increased signage and road visibility may be a cost-effective way of bringing in more shoppers. Door-to-door leafleting in market neighborhoods may also increase turnout. Getting shoppers signed up on an email distribution may provide a sort of electronic “word of mouth” to alert shoppers to special events at the markets. This can be accomplished by having tailgate market gift certificates available in a drawing, with registrants required to provide their email addresses.

- 4) Over 60% of tailgate market shoppers are women. Advertising and outreach that specifically targets women may pay off better than marketing towards men.

Future Research Recommendations

Tailgate markets will be well-served if customer survey work continues annually or every other year. In addition to the survey questions asked in 2004, ASAP may want to consider the following additional questions:

- 1) What is your age range? (15-25, 25-30, 30-40, etc.)
- 2) How many people live in your home?
- 3) How long have you lived in the Asheville area? (0-2 years, 3-5 years, 6-10 years, 10+ years)
- 4) Do you personally know a farmer or farmers selling at this market?
- 5) Are you familiar with ASAP, the Appalachian Sustainable Agriculture Project?
- 6) Compared to one year ago, do you buy more, less, or about the same amount of locally-grown food?
- 7) Thinking about all sources of local foods (co-ops, supermarkets, tailgate markets, restaurants, etc.), about how much do you spend per week on locally-grown food?
- 8) Is this market location convenient for your shopping needs?
- 9) When was the first time you shopped at an area tailgate market? (Name the year)
- 10) Could we contact you by email with more information about the market? (ask for email address).

Conclusion

This research strongly suggests that the tailgate markets have significant economic impact in the communities where they are located. Farmers benefit from direct retail market sales in environments that draw several hundred customers in a short period of time. Consumers are connected to the local supplies of fresh produce that they desire and are actively involved in supporting local farms. Many customers come to town with the main purpose of shopping at the markets, and go on to spend many more dollars in the surrounding neighborhood.

Tailgate market shoppers are well-aware of the local food marketing efforts headed by ASAP. Survey responses tend to infer that ASAP efforts have led to a greater awareness of local food issues and have resulted in increased spending on local food.

In sum, the tailgate markets of the greater Asheville area are now well-established parts of the local food distribution system, and their continued success and growth is likely.

*Results from a Survey of Farmers’
Tailgate Market Vendors*

in

Buncombe and Madison Counties

Prepared for the
Appalachian Sustainable Agriculture Project



by

Laura D. Kirby

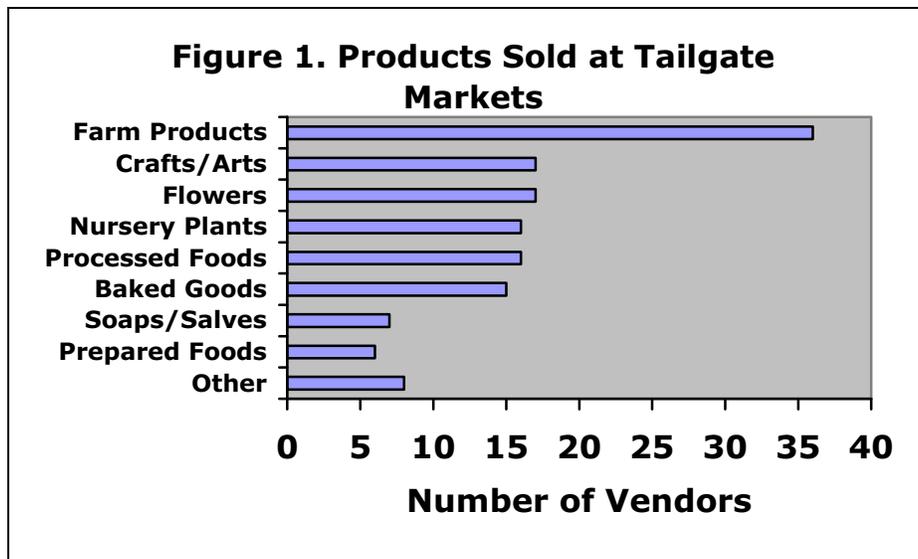
January 2006

This report may be considered a companion piece to *A Market Analysis of the Tailgate Farmers Markets of Buncombe and Madison Counties*,¹⁶⁷ prepared for ASAP by the Richard L. Hoffman Center for Assessment and Research Alliances at Mars Hill College. That report provides information about tailgate market customers, their shopping and spending patterns, and their attitudes and perceptions towards local food.

This report explores the markets from the perspective of tailgate market vendors. For the report, 61 growers and producers representing eight markets in Buncombe and Madison counties were asked about their farm or business products and sales and their experience selling through tailgate markets. For the survey, vendors completed a written questionnaire. Results are presented according to three broad sections. Section 1 provides descriptive information about tailgate market vendors, including how their products are produced and where they are sold. Section 2 examines tailgate market sales and profitability. And Section 3 looks at vendors' perceptions about tailgate market promotions and strategies for improving market business.

Section 1. Descriptive Information about Tailgate Market Vendors

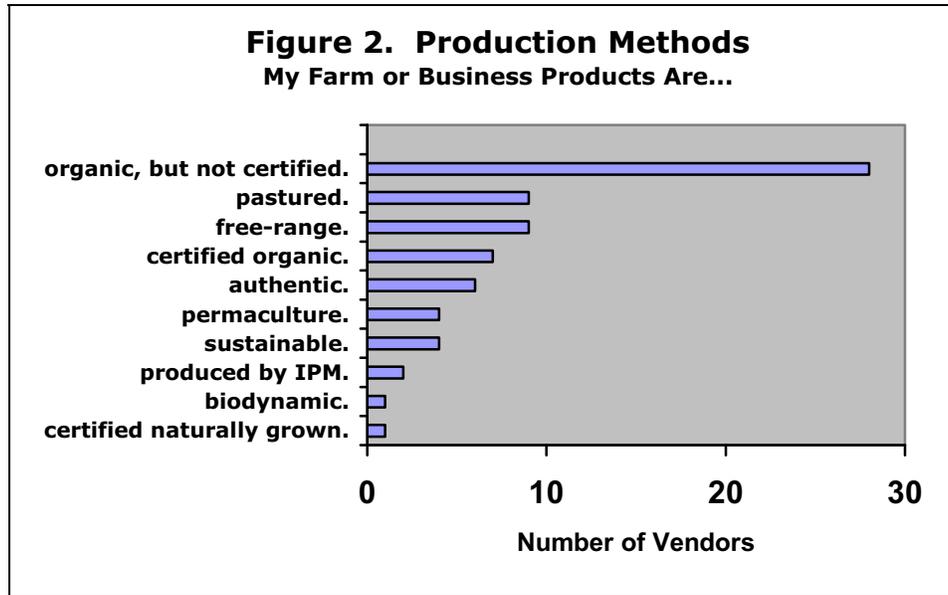
Many tailgate market vendors sell more than one type of product. While farm products are by far the most common type of product sold, a significant number of vendors sell flowers, plants, crafts, baked goods and processed foods. 13% of vendors completing the survey are or have been tobacco farmers. Figure 1 highlights different types of products sold and the number of vendors that sell each.



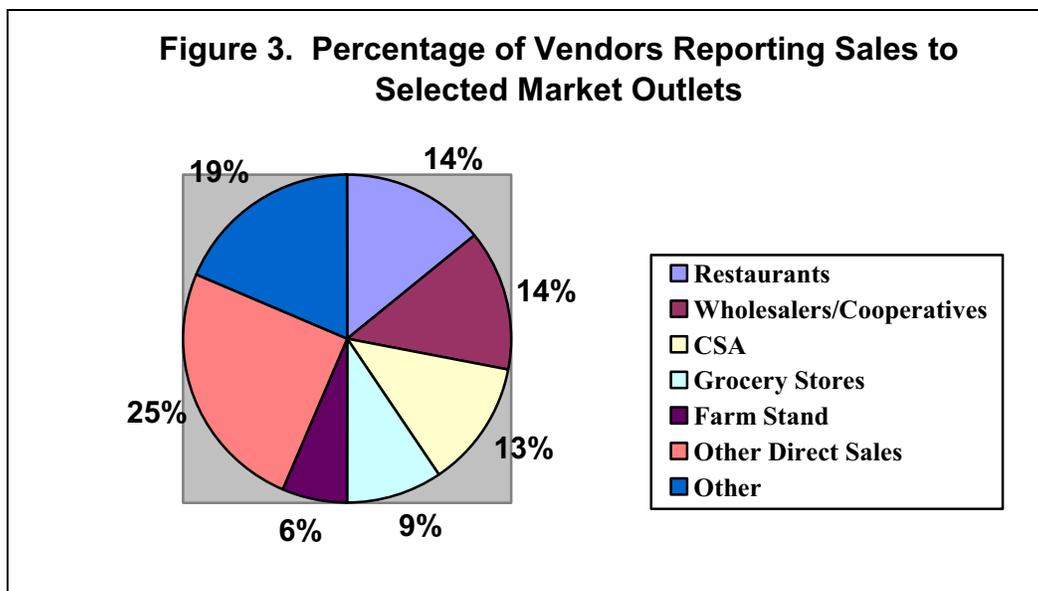
Very few tailgate market vendors follow the strict guidelines required to be certified organic growers. Only 7 (11.5%) reported that they are currently or are planning to be certified organic. Extra cost and time required for certification were the main reasons cited for not wanting to be

¹⁶⁷ *A Market Analysis of the Tailgate Farmers Markets of Buncombe and Madison Counties*. 2005. Appalachian Sustainable Agriculture Project: Asheville, NC.

certified organic. One vendor reported that not having the organic designation “doesn’t seem to bother buyers.” In fact, many still follow organic guidelines and other types of non-conventional farming practices (see Figure 2).



Only about one quarter of tailgate market vendors (26%) sell exclusively through tailgate markets. On average, the vendors reported selling between 60% and 70% of their products through tailgate markets and the rest through other outlets. Other market outlets and their relative usage by vendors are identified in Figure 3. The large category “Other Direct Sales” might include things such as pick-your-own farms for fruits and berries or various retail locations for crafts. There was no significant difference in market outlets used from 2002 to 2003.

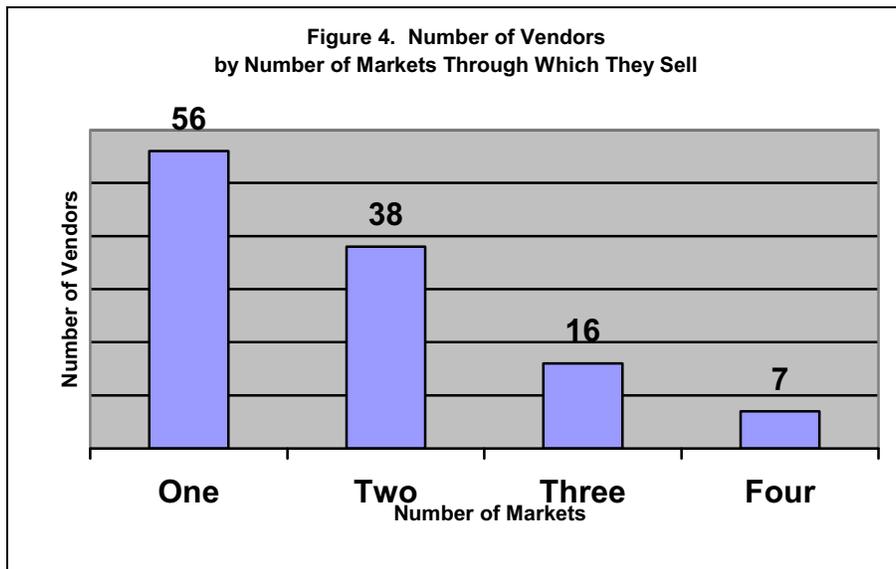


Tailgate market vendors sell primarily to buyers within their communities. Across both years, 57% of tailgate market vendors reported that 100% of sales go to buyers in the local area. That figure jumps to nearly 80% when calculating vendors who reported at least 90% of sales to buyers in the local area. In 2003, 31 vendors (51%) reported an increase in sales to local markets over 2002, though the increase was modest. Most of those who reported an increase identified the increase as 10% or less.

While not all tailgate market vendors have farms – those producing only baked goods or crafts, for example – 43 reported having some amount of farm acreage. Farm sizes ranged from very small at 1/10th of an acre, to very large at approximately 100 acres. Across both years, the average farm size was 19 acres, with an average of 4.5 acres in production. According to the surveys more than 600 acres owned by tailgate market vendors went unfarmed each year, suggesting significant excess production capacity for this group of farmers.

Section 2: Tailgate Market Sales and Profitability

Tailgate markets are a viable option for farmers wishing to sell their products directly to consumers. Vendors were asked questions about sales at their most profitable tailgate market and other markets where they sometimes sell their products. Most vendors routinely participate in more than one market (see Figure 4). In fact, each of the eight markets was identified as the “most profitable market” by at least one group of vendors.



When asked how they determine prices for products sold at tailgate markets, most vendors (63%) reported that they base their pricing on current market prices. Some (31%) reported using both market prices and production costs to set prices. A few (6%) said they simply base their prices on the costs of production.

Vendors vary widely in size and scale of business. Weekly sales ranged from \$20 to \$700. For those reporting total sales for the season, the range was from \$100 to \$25,000. Using the average

full season sales number multiplied by the number of vendors surveyed generates an estimate of \$238,112 in total sales for the season from a single market. The same formula can be used to estimate \$108,034 in sales from the second most profitable market for the 38 vendors who reported selling at two markets, and \$44,800 in sales from the third most profitable market for the 16 vendors who reported selling at three markets.

Adding together these estimates generates a total seasonal sales estimate of \$390,946 for the 61 vendors surveyed here. To the extent that there are more or less vendors, total tailgate market sales for a season will of course be higher or lower. There are currently an estimated 150 vendors who participate in some level in the farmers tailgate markets during the months of May through September, though all of them do not participate each week.

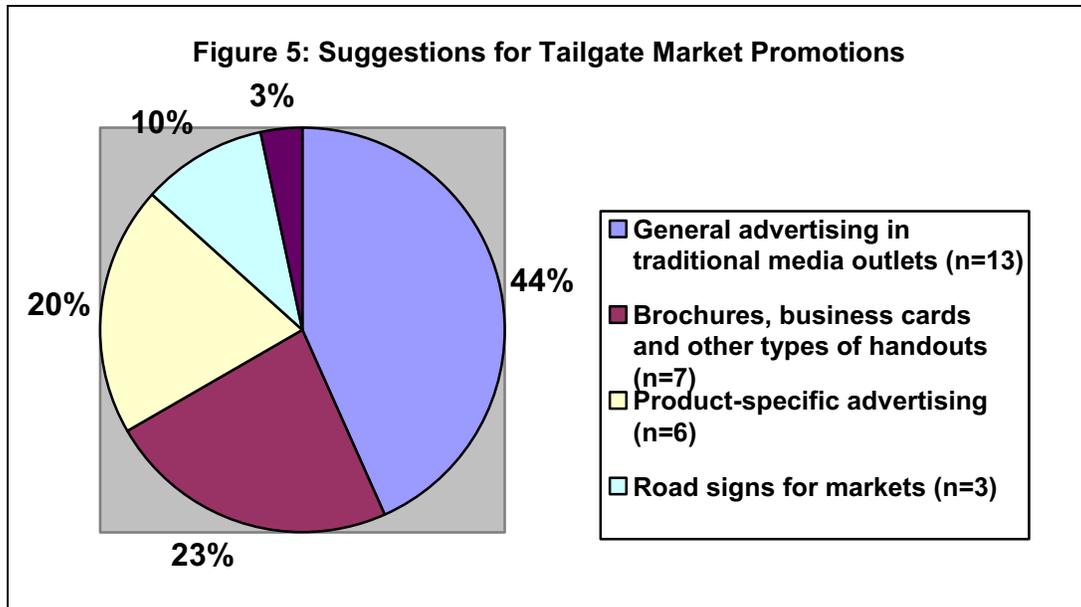
Section 3. Tailgate Market Promotions

The Appalachian Sustainable Agriculture Project’s (ASAP) *Local Food Guide* is one formal type of advertising used to promote farmers tailgate markets. More than 70% of vendors responded that the *Local Food Guide* does increase consumer demand for their products, but only 45% of vendors reported that they are listed in the guide. In other words, vendors do not need to be listed in the guide in order to benefit from it. ASAP, along with the Mountain Area Tailgate Marketing Association (MTMA), has developed marketing campaigns, logos and professional signage for promoting tailgate markets. Vendors were asked their opinions about these promotions and the effect the promotions have had on their business. Overall, opinions about the promotions were positive. Table 1 highlights the number and proportion of vendors who agree or strongly agree with a series of statements about tailgate promotions.

Table 1. Opinions of Vendors on Tailgate Market Promotions

	Agree or Strongly Agree	Disagree or Strongly Disagree	No opinion	Total
I have noticed an increase in market promotions this year compared to last year.	52 (85.2%)	2 (3.3%)	7 (11.5%)	61 (100%)
The new promotions are effective ways to expand tailgate markets’ customer base.	54 (88.6%)	1 (1.6%)	6 (9.8%)	61 (100%)
The promotions provide advertising and outreach that enhances the marketing of my products.	48 (80.0%)	3 (5.0%)	9 (15.0%)	60 (100%)
The promotions have enhanced my business with existing customers.	35 (59.3%)	9 (15.3%)	15 (25.4%)	59 (100%)
The promotions have helped me access new markets.	30 (50.0%)	9 (15.0%)	21 (35.0%)	60 (100%)
The promotions have increased my sales at market.	41 (68.3%)	6 (10.0%)	13 (21.7%)	60 (100%)
There are many new shoppers at the market this year.	43 (70.5%)	7 (11.5%)	11 (18.0%)	61 (100%)

Vendors were asked for ideas about marketing materials or promotions that would enhance their market business. From 30 responses, suggestions are grouped according to topic and presented in the following chart (Figure 5). Vendors clearly want to see more advertising through traditional media outlets such as radio, television and newspaper.



When asked for suggestions for improving tailgate markets overall, a significant number (n=11) asked for more traditional advertising, expanded to include ads for individual markets and for specific types of products available at markets. Several (n=5) suggested having special events at markets and special market days that could enhance the festive atmosphere of the markets. A few (n=3) introduced the idea of having financial incentives for tailgate market shoppers. These ranged from subsidizing food for the needy to distributing coupons that would be accepted by market vendors and reimbursed by MTMA. All vendors were asked whether they would be willing to accept food stamps at tailgate markets. Responses were mixed, with 46% responding yes and 54% responding no.

Related to market expansion and improvements, vendors were asked their opinions about participating in a centrally-located growers tailgate market in Asheville that could accommodate a large number of vendors and customers, with ample parking, a permanent shelter and bathroom facilities. More than half of vendors surveyed (59%) were interested or very interested in the idea. Of those who opposed the idea, concerns included the fear of losing the social and community atmosphere that makes tailgate markets unique, apprehensions about increased regulations or requirements that might go along with a larger market, and worry that a large, centralized market would not remain exclusively local in nature.

Conclusion

Farmer’s tailgate markets represent an effective option for direct marketing of locally-grown food and farm products in Buncombe and Madison Counties. They are flexible enough to accommodate both large and small scale producers, organic and other types of growers, farmers

as well as vendors of other locally made products. Moreover, there appear to be opportunities for growth based on the number of unfarmed acres owned by vendors, the overall satisfaction of vendors with tailgate markets, and the high level of interest in a new, centrally located grower market in Asheville. Suggestions for market improvements and promotions identified by vendors in this survey will be useful for market leaders hoping to facilitate such market growth.

*Community Supported Agriculture
in
Western North Carolina*

Prepared for the
Appalachian Sustainable Agriculture Project



by

Laura D. Kirby

November 2005

Community Supported Agriculture (CSA) is a growing form of direct marketing by farmers in Western North Carolina. CSA is an arrangement whereby consumers pledge to purchase a share of the produce each week from a particular farmer at a price that is established at the start of the growing season. The farmer gains the security of having a guaranteed market for their produce. The consumer receives a variety of fresh, locally-grown produce all season long, as well as the opportunity to know where their food comes from and how it is produced.

A census of CSA programs taken by the USDA Alternative Farming Systems Information Center in 1999 reported no such programs in North Carolina. Today there are 28 North Carolina-based CSA farms registered on the USDA website (www.nal.usda.gov). The Appalachian Sustainable Agriculture Project (ASAP) has also seen an increase in the number of CSA programs in its project area, which includes the 23 counties of Western North Carolina (WNC). There were 21 CSA farms listed in ASAP's *Local Food Guide* in 2005, up from 10 when ASAP's Buy Local Campaign began in 2000.

In the fall of 2004, twelve CSA farms completed a survey in which they were asked about their CSA programs and the role of ASAP in supporting and promoting the programs. The farms completing the survey represent both large and small CSA farms, well-established programs and relative newcomers. The data provide a look at challenges and opportunities faced by CSA programs and evaluate the effectiveness of ASAP in supporting this type of direct marketing.

The Programs

Of the 12 CSA farms responding to the survey, 9 (75%) began their CSA programs between 2001 and 2004. Two programs started in the 1990's, in 1991 and 1999. The smallest number of shares sold by any one CSA in 2004 was 4, and the largest number that year was 52. In terms of acreage, the largest farm had 7 acres in production in 2004, while the smallest had only a 5000 square foot greenhouse. Table 1 highlights characteristics of the CSA farms surveyed here.

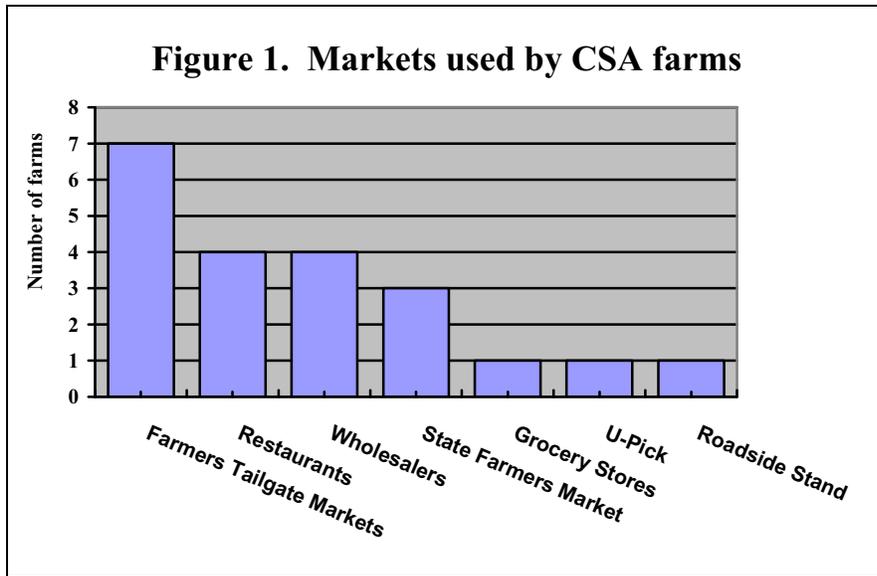
Table 1. General Characteristics of CSA Farms in WNC

<u>Characteristic</u>	<u>Average</u>	<u>Range</u>
Years in operation	4.5	1-14
Number of shares sold	27.2	4-52
Acres in production*	3.5	<1 to 7
CSA income as a % of farm income**	45.3%	10-90%

*When answer given was "less than 1", a value of .25 was used for this calculation.

**When a range was given for an answer, the midpoint was used for this calculation.

For all of these farms, the CSA program represents only a portion of their total farm business, some as little as 10% and others as much as 90%. Farmers tailgate markets are the most common venue for selling farm products outside of the CSA, followed by restaurants and wholesalers (see Figure 1).



In addition to selling farm products, CSA programs provide social and educational opportunities for members. Nine of the CSA farms surveyed (75%) encourage members to come to the farm, either for required work hours or for social gatherings such as farm tours and harvest celebrations.

Program Challenges

CSA farming has a unique set of challenges compared to traditional farming. The most significant of these as perceived by farmers is poor public awareness about CSA programs. When asked what resources or information would be helpful for marketing their CSA programs, half of all suggestions (4 of 8) involved public education, including presentations about Community Supported Agriculture for groups such as churches, civic clubs and college organizations. The next most suggested help was print media, including brochures, business cards and fliers.

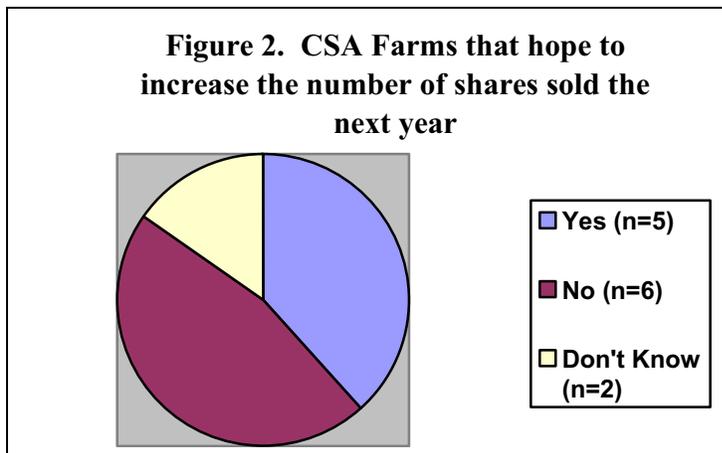
CSA operators face many of the same challenges faced by other small business owners. For example, they must find effective ways to communicate with members and manage record-keeping requirements. One-third of CSA farms surveyed keep records by hand while the rest use a variety of different types of software. Two thirds of the farms reported using the internet to communicate with members, either for distributing newsletters or sending messages as needed.

Running a CSA also requires additional time compared to traditional farming for sorting, packing and distributing shares. When asked about their interest in helping to start a CSA association, five said yes and six said no. Time was the single factor cited for not being willing to participate at that level.

Opportunities for Growth

Nine CSA programs collect feedback in some way from members – some formal and some informal – and most report this to be positive. Members are reportedly satisfied with the farm products as well as the experience of working directly with farmers. Indications are that there is potential for growth in CSA farming based on consumer satisfaction with the model.

Farmers were mixed in their opinions on expanding. Of farmers who answered a question about whether they were interested in expanding in the next growing season, nearly as many said they were as were not (see Figure 2). Further, when asked if they were interested in expanding their CSA to serve groups in the future, only two said yes. Opportunities for growth in this sector may lie in recruiting new CSA farms rather than trying to expand the size and scope of existing programs.



One way that CSA programs may be able to work more effectively is by working together cooperatively. When asked about the role of a collaborative association of CSA farms, 8 of 16 comments (50%) described resource sharing as a way to improve opportunities for CSA farming. This includes things like CSA farms joining together to order supplies in bulk and receive group discounts, or CSA programs combining their offerings to extend or expand what a single farm could offer its members. Three CSA programs reported that they currently work with other farms in this way.

Impact of ASAP Support

Five of 12 CSA programs reported that ASAP's Local Food Campaign promotional and outreach efforts, such as the *Local Food Guide* and the *Local Food – Thousands of Miles Fresher!* bumper sticker have contributed to the success of their program. Six of 12 said that ASAP's overall Local Food Campaign work has contributed to their program's success. In addition to customers learning about a CSA program through the guide, farmers reported that ASAP has been helpful in promoting and explaining the CSA concept and in raising awareness about the benefits of buying locally-grown food.

When asked what promotional materials these farms would like to see, 6 of 12 CSA farms (50%) wanted to see more of the same from ASAP – that is, continued use of the *Local Food Guide*, bumper stickers and advertising in local publications. As far as the timing of such advertising, most (60%) suggested mid-winter through early Spring before the growing season begins. Other suggestions were for ASAP to sponsor or facilitate CSA conferences, farm tours and marketing materials, and to establish a centralized local producers' market for the region.

Conclusion

The results described here reflect only the twelve CSA farms that returned a survey as part of this study. They were not randomly selected and they do not represent the full set of CSA programs in Western North Carolina. So the results must be viewed with caution and cannot be generalized to a larger population of CSA programs. They can, however, offer some insight into the challenges and opportunities facing CSA programs in this region.

In terms of the impact of ASAP in particular, it is likely that the CSA farms listed in the *Local Food Guide* and supported by ASAP marketing efforts would have a favorable impression of the organization and its work. It would be useful to know what CSA programs that are not affiliated with ASAP think of the support and services ASAP provides. Nevertheless, it is clear that what ASAP is doing is well-received by these CSA farms, and that efforts to support and promote CSA farming should continue.

*Results from a
Western North Carolina
Farm-to-College
Survey*

Prepared for the
Appalachian Sustainable Agriculture Project



by

Laura D. Kirby

April 2006

Considerable research on farm-to-college programming has been done by the Community Food Security Coalition (CFSC), a national organization dedicated to building strong, sustainable, local and regional food systems. Since 2004, the CFSC has collected data from over 100 colleges and universities around the country that purchase some amount of locally-grown foods through their foodservice departments. According to the CFSC, farm-to-college programs may be small and unofficial, mainly involving special dinners or other events, or they may be large and well-established, with many local products incorporated into cafeteria meals every day.

A recent survey of colleges and universities in Western North Carolina (WNC) conducted by the Appalachian Sustainable Agriculture Project (ASAP) provides a look at the scope of farm-to-college programming in the region and allows for comparison between national and regional programs. For the study, Foodservice Directors representing 15 of 17 colleges and universities in the 23-county region of WNC were interviewed by phone during the 2004-2005 and 2005-2006 academic years. They were asked questions about their food service programs, details about existing farm-to-college programs, and barriers and motivators related to starting a farm-to-college program.

	WNC Schools with farm-to-college	WNC Schools with no farm-to-college	National sample*
School type			
Public	1 (25%)	10 (83%)	27 (21%)
Private	2 (75%)	2 (17%)	99 (79%)
Total	3 (100%)	12 (100%)	126 (100%)
Food service operation type			
Self-operated	0 (0%)	4 (33%)	37 (29%)
Contract managed	3 (100%)	8 (67%)	92 (71%)
Total	3 (100%)	12 (100%)	129 (100%)
School size			
Average number of students	1740	5156	7816
Minimum number of students	800	584	300
Maximum number of students	3398	14653	50,000

* The national sample includes schools surveyed by CFSC that have some type of farm-to-school programming.

Of the 15 Western North Carolina schools for whom data was collected, three currently have some type of farm-to-college program. They purchase a variety of seasonal fruits and vegetables from farmers within a 200 mile radius. Some of the more commonly purchased items are lettuce, tomatoes, cabbages, melons, peppers and apples. One of the schools also purchases locally produced bread and honey. Sources for local food include individual farmers as well as farmer-managed cooperatives, farmers' markets and local or regional distributors. One school also has a large campus farm and garden, which supplies some amount of food for school foodservice. The longest operating program began in 1999, with the other two starting in 2002 and 2004.

The extent to which colleges and universities purchase locally-grown food varies widely. Nationally, the percentage of total purchasing estimated by foodservice directors as local ranged from less than 1% to 80%. In WNC, one Foodservice Director reported spending approximately

11% of their total food budget on locally-grown foods. Data for the other two schools were not available. What those Foodservice Directors did report is that locally-grown food is used in regular menus and not just for special events or promotional activities.

Organization of farm-to-college programming

Organizers of successful farm-to-college programs throughout the country emphasize the importance of recognizing and tapping into diverse interests in terms of program planning and administration. CFSC published these comments from organizers to illustrate this point:

- *Recognize all players involved...this has to be a diverse group, such as students, farmers, food service directors, administration.*
- *Student involvement is critical. However, without more continuous commitment on the part of a staff person, institutional manager, or other project steward, the project will likely not succeed in the long run.*

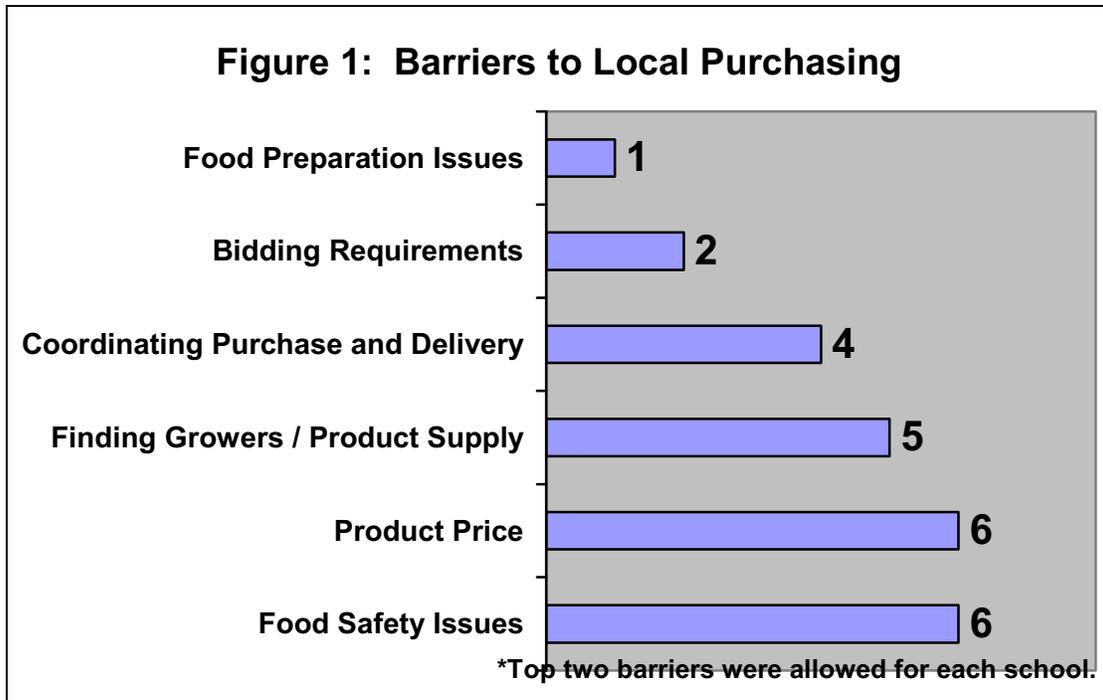
For the Western North Carolina schools that are currently purchasing locally, involvement by multiple stakeholders is common. Altogether, nine different types of groups were named by survey respondents as having been involved with farm-to-college programming at some time. In addition to students, school administrators and farmers, stakeholder groups included campus sustainability and environmental organizations, agricultural extension agents, university staff and faculty, and the Appalachian Sustainable Agriculture Project.

Local purchasing has been promoted in various ways by the schools surveyed. Farmer profiles, information in dining locations about the farm-to-college program, speakers and demonstrations, and special events highlighting locally-grown food have all been used to publicize farm-to-college efforts.

Barriers

The top two barriers to local purchasing named by the 15 Foodservice Directors surveyed were food safety issues and product price. Food safety issues may include such things as pasteurization and other food safety requirements or, more notably, a federal guideline calling for \$1 million liability insurance for farmers. Price issues are complicated, as evidenced by CFSC's survey data. CFSC reported that half of the foodservice directors interviewed said local farmers' products cost more to purchase and half said they do not cost more.

Other barriers named by WNC schools surveyed in order of how frequently they were reported include: finding growers and an adequate supply of local products; coordinating purchase and delivery of products; bidding requirements of school foodservice; and labor costs associated with additional food preparation requirements. (see Figure 1, next page)

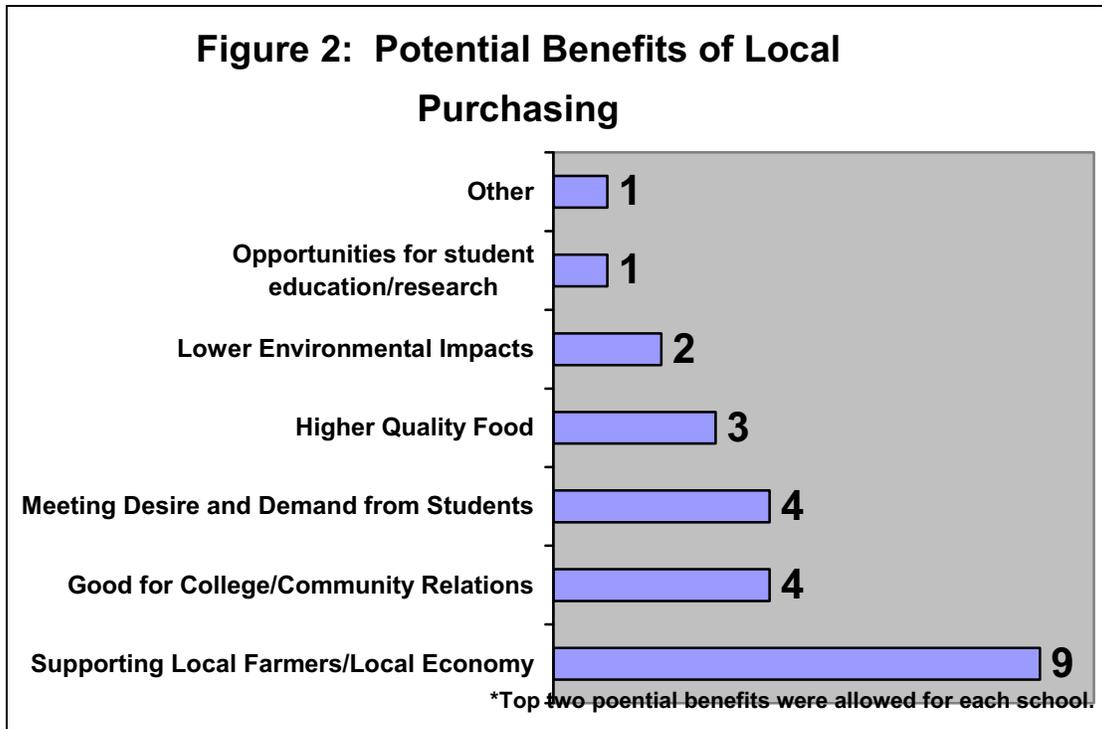


It is interesting to compare barriers identified by WNC schools – most of whom *are not* currently purchasing locally – to barriers identified by schools across the country that *are* currently purchasing locally. The top two barriers reported nationally were finding local growers with an adequate supply of local products and coordinating purchase and delivery of products.¹ In comparison to the traditional food system, which is streamlined and efficient in terms of getting food to institutions, local purchasing is logistically challenging.

Motivators

Both nationally and in this region, supporting local farmers and the local economy are overwhelmingly the top reasons given for interest in local purchasing. Other significant benefits of local purchasing named by WNC schools include meeting desire and demand from students, the fact that local purchasing can be good for college/community relations, higher quality food, and lower environmental impacts. One other benefit named by a number of farm-to-school programs around the country is the opportunity for student education and research in economics, agriculture, environmental science and related fields.

¹ *Farm-to-College Survey Results*. Community Food Security Coalition. www.farmtocollege.org.



Potential for expanding Farm-to-college programming in WNC

Of twelve WNC schools that do not currently purchase local farm products, four expressed an interest in doing so. Together, those four institutions serve between 20,000 and 25,000 meals per day. Added to the more than 4,800 meals per day served in the three schools that already purchase local farm products, this represents a significant potential market for Western North Carolina farmers. Just as importantly, it represents an opportunity to influence some of the other forces behind farm-to-college programming – alarming trends such as increasing rates of obesity among students and the proliferation of fast food chains as contracted vendors on college campuses.

Summer Camps as a Potential Market Channel
for
Locally-grown Food
in
Western North Carolina

Prepared for the
Appalachian Sustainable Agriculture Project



by

Laura D. Kirby

July 2006

In Western North Carolina (WNC), the region’s natural beauty and mild climate contribute to a high concentration of summer camps, among the highest in the nation.¹ The camp season also coincides almost exactly with the growing season in the region. To explore the potential of summer camps as a market channel for locally-grown food and farm products, the Appalachian Sustainable Agriculture Project (ASAP) initiated a survey of summer camps in the Spring of 2006. ASAP is a nonprofit organization dedicated to supporting farms and farming in WNC through programs and services designed to increase local consumption of locally-grown food and farm products. The goals of the survey were to determine to what extent camps in the region were currently purchasing locally-grown farm products, and to explore the potential of summer camps as a market for farmers wishing to sell farm products locally.

Camp Foodservice

A comprehensive list of overnight summer camps in WNC was obtained by combining lists from the Western North Carolina Camps Association and the website Camppage.com, a national database listing camps in every state. A total of 49 camps were identified and sent a link to an online survey, which was completed by 23 camps for a response rate of 47%. Table 1 identifies characteristics of summer camps completing the survey.

Table 1. Basic characteristics of WNC Summer Camps and their Foodservice

	Range	Average
Number of campers	90-4000	725
Number of meals/day	<100 – 1500	540
Spending on camp food	<\$5,000 - \$110,000	\$48,250

Twelve camps reported that they had purchased locally-grown food for camp meals during the last camp season. Assuming that the 26 camps not completing the survey did not purchased locally-grown food, this means that 24% of all WNC summer camps were local purchasers in 2005. Summer camps that purchased local food reported buying a wide variety of fruits and vegetables. In most cases, camp foodservice directors purchased locally-grown food directly from a farmer, either through a roadside stand or at a farmers’ tailgate market. In a few cases the camps obtained local food through regional distributors, and in two cases the camps reported purchasing local produce directly from a grocery store or supermarket.

Local purchasing rates ranged from very small, at less than 1% of total food purchases, to significant, at just over 15% of total food purchases for one camp. The average percentage of local food purchased by camps completing the survey was 5%. The total dollar amount spent on local food by 12 camps last year was between \$25,000 and \$30,000, representing less than 0.1% of the estimated \$2.4 million in food spending by camps in the region.²

¹ WNC Camps Association.

² \$2.4 million equals the \$48,250 average annual food budget reported by these camps X 49 camps in the region.

Market Potential of Summer Camps

Of summer camps that did purchase local farm products last year, 75% expressed high interest in continuing to purchase local produce and 25% indicated that they expect to purchase more local produce going forward. Moreover, six additional camps expressed high interest in initiating local purchasing. Summer camps are motivated by many reasons to purchase locally-grown food. Table 2 lists the top five reasons rated by camps.

Table 2. Top five motivators for local purchasing by summer camps

1. Higher quality, fresher food
2. Supporting local farmers
3. Health benefits of fresher food
4. Supporting the local economy
5. Lower environmental impacts

In exploring the possibility of expanding local purchasing by camps, survey respondents were asked to rate different barriers or challenges associated with buying locally-grown food. Top barriers rated by the group included coordinating purchase and delivery of locally-grown food, product price, and finding growers with an adequate supply of local products.

Respondents were also asked to choose from a list which types of food they would be interested in purchasing locally. Table 3 shows that camps are interested in many different types of fruits and vegetables as well as meat and dairy products.

Table 3: Foods grown in WNC by interest-level of camps

Top quartile 75% -100% of survey respondents named these foods as items they might be interested in purchasing from local farmers	apples, beans, blueberries, broccoli, cheese, cucumbers, eggs, lettuce, melons, onions, peppers, potatoes, strawberries, tomatoes
2nd quartile 50% - 75% of survey respondents named these foods as items they might be interested in purchasing from local farmers	beef, peas, poultry, squash, yogurt
3rd quartile 25% - 50% of survey respondents named these foods as items they might be interested in purchasing from local farmers	asparagus, blackberries, cauliflower, eggplants, greens, pork, raspberries, spinach
4th quartile 0% - 25% of survey respondents named these foods as items they might be interested in purchasing from local farmers	beets, cabbages, leeks, pumpkins, radishes, turnips

While summer camps were very interested in purchasing locally-grown farm products, none were familiar with ASAP's *Local Food Guide*, the main way that ASAP has provided

information for consumers about where to obtain local food. ASAP needs to examine whether the *Local Food Guide* could be used by institutional buyers to locate local food and farms and, if so, how it could be more effectively distributed to those types of buyers within the region. It may be appropriate to develop new guides aimed at institutional buyers rather than trying to adapt the existing guide.

Conclusions and Recommendations

Summer camps in Western North Carolina represent a viable market for small-scale farmers in the region based on high interest from summer camps and the natural fit between the camp season and the growing season in the region. Based on the experience of camps surveyed here, a realistic range of camp spending on local food is between 1% and 15%. With less than 0.1% of total camp food spending currently made up of local food spending, there is considerable room to increase local food purchases by summer camps.

The low current rate of spending on local food by camps also means that despite high interest there is little infrastructure in place making it possible to incorporate locally-grown food into camp foodservice. Camps that are purchasing local farm products have to go out of their way to find them and do not have access to basic information about local growers. Efforts to link farmers with summer camps must address fundamental foodservice issues like the logistics of placing orders and receiving deliveries.

Defining Success
in the
Farm-to-School Arena

Prepared for the
Appalachian Sustainable Agriculture Project



by

Laura D. Kirby

January 2006

Farm-to-school programming is on the national agenda. In March of last year the House of Representatives passed a bill authorizing federal grants to help schools cover the initial costs of bringing locally-grown foods into school meals. School districts nationwide and right here in North Carolina are reporting success with this type of farm-to-school programming. But most of us don't know what success means in this context. Does it mean a school district buys all of their food from local farmers or producers? Not likely. So how much can a school district reasonably substitute locally-grown foods for foods grown in other regions? How do they deal with challenging issues such as coordinating purchase and delivery of fresh fruits and vegetables to individual schools? And how are the students, teachers and other members of the community experiencing success from farm-to-school programming?

To answer these questions, the Appalachian Sustainable Agriculture Project (ASAP) looked to regional farm-to-school success stories, the districts in Western North Carolina where locally-grown foods are being incorporated into school lunches and connections are being made in the classroom between food students eat and how it is grown. Child Nutrition Directors (CND) from the Asheville City Schools and the Madison, Mitchell, Yancey and Rutherford County School Districts were interviewed. They shared insights about working with local farmers and offered advice for overcoming obstacles. In addition, surveys were mailed to Child Nutrition Directors in nineteen other public school districts in Western North Carolina to find out what they think it would take to succeed with farm-to-school programming.

SUCCESS = SMALL STEPS

When it comes to using locally-grown foods in school meals, success is defined by small steps. The best approach, according to Yancey County Schools Nutrition Director Beth Palien, is to start small. "Pick one farmer and one product," she advises. The Yancey County farm-to-school program began several years ago when a local tobacco farmer transitioned to hydroponic lettuce production. The school purchased lettuce from that farmer and now purchases lettuce year-round and tomatoes, in season. In an average week, two to five cases of fresh produce are delivered to the nine schools in the district.

For Mitchell County Schools, the one product was apples. According to Mitchell County CND Heather Calhoun, they began purchasing locally just this year. Beginning with a harvest celebration event in the fall launching their farm-to-school program, a total of 18 cases of apples were delivered to the eight schools in that district over the next few months. They are looking to expand by adding locally-grown potatoes or lettuce.

Rutherford County Schools, a much larger system with 20 schools and more than 10,000 students, also began buying local apples this year. The apples they purchased were grown and processed by a local farmer, arriving at the district's central warehouse in 3 pound bags sliced – more than 3000 bags of them over a four month period. Despite the large quantity, Rutherford County CND Lori Moore explains that incorporating the local apples has been easy and well worth the one extra phone call it takes to order them.

*"Start small.
Pick one farmer
and one
product."*

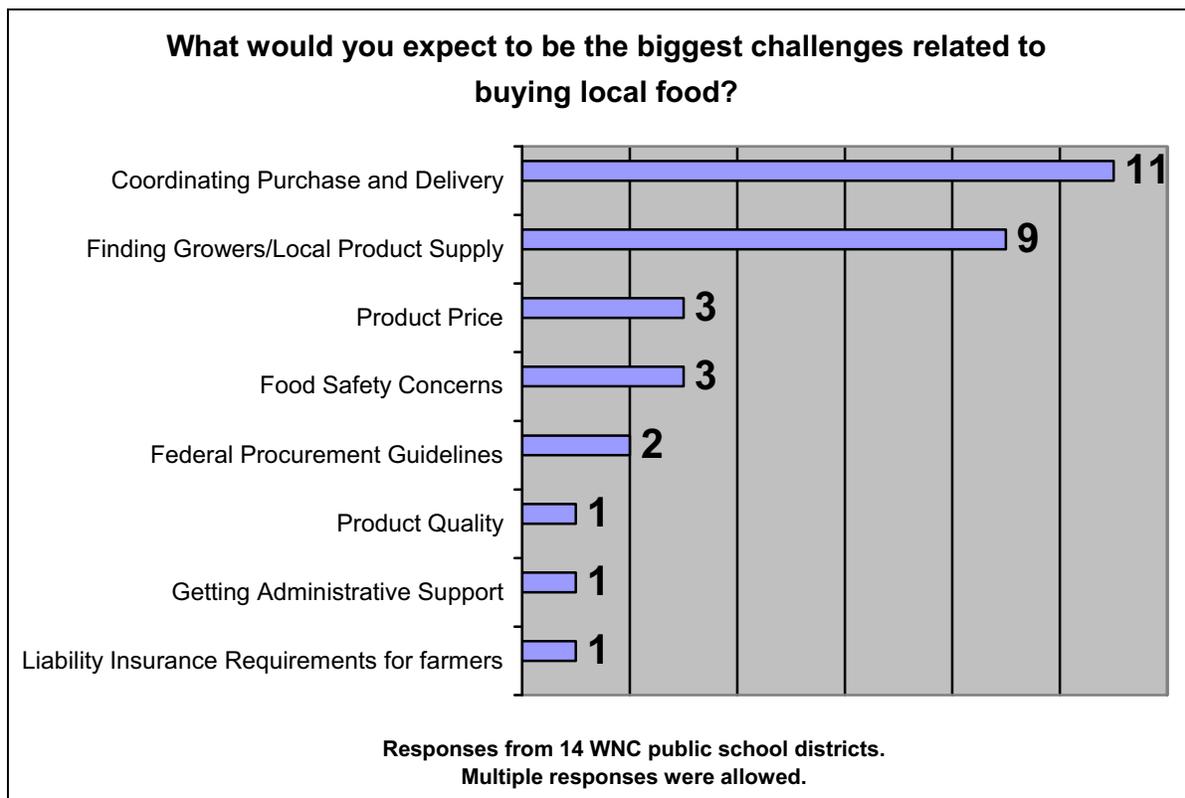
*---Beth Palien,
Yancey County
CND*

Brenda Spence, CND for Madison County Schools, has worked with local growers on and off since 2000, buying such things as cantaloupe, watermelon, peppers, squash, collards, potatoes, lettuce and tomatoes. It all started when Brenda decided to substitute tomatoes grown by a farmer in Madison County for the ones delivered by the district's distributor. It was about taste and freshness, as anyone who has ever tasted a farm fresh tomato can understand.

The Asheville City Schools have been successfully incorporating locally-grown produce in school meals for about a year and a half. Child Nutrition Director Cindy Lawler explained that bibb lettuce and potatoes were delivered every other week to each of nine schools in the system initially. This year they have added a few other items such as cabbage, peppers, squash and tomatoes. Like the other CNDs interviewed, Cindy hopes to see steady growth in local produce purchasing, with growth occurring just as the programs started – in small steps.

SUCCESS = CREATIVITY AND FLEXIBILITY

School foodservice is a tight business. With federally-imposed guidelines for per meal cost and nutritional value, it sounds like the kind of environment where there is no room for creativity or flexibility. But creativity and flexibility abound in the experiences of the farm-to-school programs examined here. Their stories illustrate options for addressing some of the concerns voiced by districts that are not buying from local farmers (see chart).



The logistics of getting locally-grown food to individual schools is in fact a major obstacle that districts have overcome in different ways. In Yancey County, Beth Palien works with a farmer

who is located along the route of the district's regular food service delivery driver. Incorporating local food in that situation simply means adding one extra stop to the regular driver's route.

Does Locally-grown Food Cost More?

Interestingly, higher prices associated with locally-grown produce tend to be related to delivery costs rather than the actual cost of produce. In fact, local produce is often priced lower than produce offered by a district's regular foodservice distributor. Nutrition Directors explained that the prevailing market price is generally what is paid to local farmers.

Madison County and Asheville City Schools pay extra to have the food delivered directly to each school. While this drives up the cost, they both explain that they are able to do this because of strong School Board and County Commissioner support. *(see sidebar about cost issues.)*

In Mitchell County, delivery occurs less often and is coordinated with other regularly scheduled deliveries to each school. This arrangement is possible because they have chosen products that don't have to be refrigerated right away, like apples and potatoes. These choices also offer a solution to the district's second major logistical challenge, the lack of refrigerated storage.

For a large district like Rutherford County Schools, existing infrastructure including a centralized warehouse and district-owned delivery trucks make delivery less problematic. The challenge for them becomes being able to fill large quantity orders. In fact, since menus must be the same across all schools in a system, quantity can be a problem for a district of any size. "Sometimes you get too much of something and other times what you need is not available," says Brenda Spence. "You have to be creative and work with what you've

got. When the menu says 'veggies and dip,' for instance, you could use carrots or broccoli or squash or any number of things." And since most purchasing is still occurring through traditional foodservice providers, they can easily be used as a backup source.

SUCCESS = EDUCATIONAL LINKAGES

According to Emily Jackson, Growing Minds/Farm-to-School Director for the Appalachian Sustainable Agriculture Project, success is about pulling the cafeteria into the educational realm. In other words, it's about using the farm or garden setting as a backdrop for learning basic science, math, reading and writing skills. Kids are more motivated to learn when learning is tied to something interesting or relevant to their lives, and what's more relevant than what they eat? In North Carolina, farm-to-school programming also provides a way for kids to reconnect to the state's agricultural heritage, which is particularly relevant to children from farming families.

At its best, farm-to-school programming includes local food in salad bars and lunch menus as well as other educational components such as school gardens, farm field trips, healthy cooking classes and tastings of different kinds of apples, tomatoes and other foods. This type of success is happening in the Asheville City Schools where parents have embraced the concept of farm-to-school. At Isaac Dickson Elementary School, for example, parent volunteers have led cooking classes for students and local chefs have done school-wide healthy cooking demonstrations. Students are responding by trying – and enjoying – new foods like pumpkin soup and 'mac-n-cheese with trees' (broccoli).

In terms of nutrition education, exposure to farm fresh food helps kids learn how to make healthy food choices and appreciate the taste of fresh fruits and vegetables. This positions students to avoid food-related diseases such as obesity, diabetes and hypertension. Cindy Lawler notes that students are learning a lot about different types of fruits and vegetables. Some Asheville City Schools middle schoolers, for example, had never heard of red plums before they were served them in school lunches. And, Cindy explained, some elementary students who visited a farm where okra was growing were amazed that it didn't grow in little pieces with a brown, crispy crust.

SUCCESS = BUY-IN AT MULTIPLE LEVELS

According to ASAP's Emily Jackson, farm-to-school efforts cannot succeed without support from Child Nutrition Directors. Child Nutrition Directors say that administration and parental support is essential. And when kitchen managers and staff are on board, adds Cindy Lawler, problems like different food preparation needs or varied delivery schedules are minimized. Beth Palien explains that incorporating locally-grown food has actually been good for morale among kitchen staff because they appreciate that the district is trying to support local farmers. In fact, supporting local farmers was the top reason given by CNDs interviewed here for backing the farm-to-school concept.

Students cannot be left out of the buy-in equation. After all, they are the ones eating the food, locally-grown or not. For Lori Moore, the fact that students are eating the local apples so well is what makes the effort a success. Many children who don't typically eat whole apples are devouring the sliced apples, she says. It makes her and the kitchen staff happy to see less food going in the trash when lunch trays are returned.

SUCCESS = SEIZING OPPORTUNITIES

Interest is high among WNC Nutrition Directors who completed a written survey about farm-to-school programming. A few of the districts are already using components of farm-to-school programming, such as school gardens, farm field trips and cooking classes. Nearly two thirds expressed interest in initiating those types of activities. And more than half of WNC districts are currently buying from NC farmers through two statewide farm-to-school initiatives (*see sidebar*).

Most significantly, more than 70% of those responding to the survey scored their interest in buying from local farmers as 7 or higher on a scale of 1 to 10, with 1

Statewide Farm-to-School Initiatives

In 1994, the Department of Defense began offering its produce buying services to institutions other than military bases. The **Department of Defense Farm to School Program** (also called **DoD Fresh**) was a result of that initiative and schools were given the option of using commodity entitlement funds to purchase fresh fruits and vegetables grown within their state.

In North Carolina, there is also a state-sponsored farm-to-school program (**NC Farm to School**) which facilitates delivery of produce grown by North Carolina farmers to North Carolina public schools.

being ‘not at all interested’ and 10 being ‘very interested.’ If each of those districts began buying from local farmers at a reasonable level – *one product from one farmer* – the impact to Western North Carolina farmers and schools would be significant, with slow, steady growth expected over time.

*Restaurants as a Potential Market Channel
for
Locally-grown Food
in
Western North Carolina*

Prepared for
the Appalachian Sustainable Agriculture Project



by

Laura D. Kirby

November 2006

Local food campaigns are fundamentally public awareness initiatives aimed at increasing local consumption of local farm products. In an early review of ten emerging local food campaigns across the US, all ten included restaurants on a list of potential markets worth pursuing.¹ Today, hundreds of organizations and initiatives around the country are working to help farmers access the restaurant market. For local food campaigns interested in scaling up beyond direct sales of local farm products, restaurants are widely recognized as a good potential market.

One reason for the focus on restaurants is that they are thought to have good potential for higher returns to farmers than other large scale markets like food stores and institutions. This in turn may be due to the fact that it is easier to label food as local in restaurants compared to institutional foodservice establishments. Restaurants also typically feature fresh produce to a greater extent than other foodservice settings. And the majority of them – as many as 70% according to the National Restaurant Association – are small businesses.²

Restaurants have made up the largest category of business joining the Local Food Campaign operated by the Appalachian Sustainable Agriculture Project (ASAP) since 2000. ASAP is a nonprofit organization dedicated to supporting farms and farming in Western North Carolina (WNC) through programs and services designed to increase consumption of locally-grown food and farm products. The organization publishes a *Local Food Guide* each year, which is a comprehensive guide to food and farms in the region.

In 2006, 40% of organizational buyers listed in ASAP's *Local Food Guide* were restaurants. A cursory review of restaurants in the guide, however, suggests that only certain types of restaurants are interested in local food – generally those that are independently owned and operated and serve food from just one or a handful of locations. Research from other regions confirms that business structure is correlated with local food purchasing. Lower interest and lower levels of purchasing local food have been observed among franchises and chains than independently owned and operated eating establishments.³

ASAP's local food campaign has historically focused on the area immediately surrounding Asheville because of the high concentration of people and businesses in that area. The broader campaign area includes all 23 counties of WNC. Calculating projected restaurant spending on locally-grown food in the region can better equip ASAP for program planning outside of the campaign hub area. It can also give farmers in the region some information about the potential size of this market as they face decisions about whether to expand or shift into new crops for potentially higher value local markets.

This report uses data from the 2002 US Economic Census to project the potential for locally-grown food purchases by restaurants in the region. As a way to screen for business structure when calculating restaurant spending, it is possible to distinguish restaurant sales to full-service restaurants from sales to limited-service restaurants. According to the US Economic Census, a

¹ FoodRoutes Network, 2002. www.foodroutes.org.

² *Industry at a Glance*. Online document, National Restaurant Association. www.restaurant.org/research/ind_glance.cfm.

³ See, e.g. Tropp, D., Siebert, J.W., and Kim, S.Y. 2004. *Enhancing Commercial Food Service Sales by Small Meat Processing Firms*. USDA Agricultural Marketing Service.

full-service restaurant is one that provides food to patrons who order and are served while seated. Using this category of restaurant excludes the majority of chains and franchises in the region, though not all.

Restaurant Food Spending in Western North Carolina

According to the U.S. Economic Census, there were more than 1700 *Eating and Drinking Places* in all of Western North Carolina in 2002, the most recent year for which data is available.⁴ This includes each physical location where a business with payroll prepares meals, snacks and beverages to customer order for immediate on-premises and off-premises consumption. Annual sales from those establishments totaled \$914.5 million in 2002. The high concentration of restaurants in WNC is due in part to the strong tourism industry in the region.

While county level data are incomplete, state-level data indicate that full-service restaurant sales accounted for 43% of total sales from *Eating and Drinking Places* in North Carolina in 2002. Applying that ratio to the \$914.5 million in total sales from *Eating and Drinking Places* in WNC in 2002 leads to estimated sales through full-service restaurants in the region of \$393.2 million. The U.S. Economic Census documented 724 full-service restaurants in the 23 counties of WNC in 2002.

According to the National Restaurant Association, the cost of food typically represents 33% of sales for the full-service category of restaurants.⁵ A corresponding estimate for food purchases by full-service restaurants in the region is \$129.8 million. How the typical food dollar is spent may vary considerably from restaurant to restaurant, though produce purchases are likely to represent at least 9% of total food purchases by restaurants.⁶ A conservative estimate of produce purchases by full-service restaurants in WNC, then, is 9% of \$129.8 million, or \$11.7 million. The focus on produce in this analysis reflects the fact that produce holds the greatest potential for local purchases in the short-term due to reduced infrastructure requirements compared to meat, dairy and processed fruits and vegetables.

Potential Local Food Purchases by Full-Service Restaurants in Western North Carolina

ASAP collects data each year from organizations participating in its local food campaign. Participating restaurants have reported spending anywhere from 1% to 75% of their annual food budget on locally-grown foods, the majority purchased during the summer months. On average, the percent of total food purchases reported as local by restaurant campaign members in 2005 was 15%. Using the estimated \$11.7 million in estimated produce expenditures by the area's full-service restaurants as a starting point and applying a rate of 15% as a realistic target for local food purchasing, the estimated market potential for local produce purchases by WNC restaurants is around \$1.8 million.

⁴ 2002 *Economic Census*. US Census Bureau. (Geographic Series: Accommodation and Foodservices).

⁵ *Restaurant Industry Operations Report*. Online document, National Restaurant Association. www.restaurant.org/research/operations/report.cfm.

⁶ Produce Marketing Association.

It is important to note that the restaurant potential calculations reported here do not take into account many other issues identified as barriers to purchasing locally-grown food by restaurants and other organizational buyers. In surveys to organizational buyers throughout the region a number of barriers were identified as significant.⁷ Top among those were the challenge of coordinating purchase and delivery of locally-grown food and the challenge of finding an adequate supply of locally-grown food. In order for regional farmers to realize the potential of the restaurant market, it will be necessary to investigate and address those and other distribution issues. At the same time, continued efforts to generate strong consumer demand for local food will be essential to maintaining strong restaurant demand for local farm products.

⁷ See <http://www.asapconnections.org/special/research/index.html>.

Local Food Purchasing
by
Highly Motivated Businesses and Consumers
in
Western North Carolina

Prepared for
the Appalachian Sustainable Agriculture Project



by
Laura D. Kirby

January 2007

The Appalachian Sustainable Agriculture Project (ASAP) is a nonprofit organization dedicated to sustaining farms and farming in Western North Carolina (WNC) through programs and services designed to promote local consumption of locally-grown food and farm products. The main strategy used by ASAP to accomplish its goals is a Local Food Campaign, which involves public education and promotional work, farmer training and support, and efforts to build and strengthen local markets for local farm products.

A basic assumption of this work is that as demand for locally-grown items increases, so will spending on local food and farm products. In order to test this assumption ASAP initiated two surveys exploring local food purchasing by highly motivated buyers. One was an online survey for consumers regarding various types of food they purchase or would like to purchase from local producers. The second was a written questionnaire for larger scale buyers, places like restaurants, food stores and institutions that serve or sell food. The research was guided by two questions:

- Are businesses and consumers with high interest in locally-grown foods able to get the foods they want from local producers? and
- If not, which foods are they able to get?

Both surveys were targeted to buyers with established high interest in buying locally-grown foods. In other words, survey results may not be generalized to the entire population of Western North Carolina but may be representative of demand by individuals and organizations in the region with high interest in buying locally-grown food.

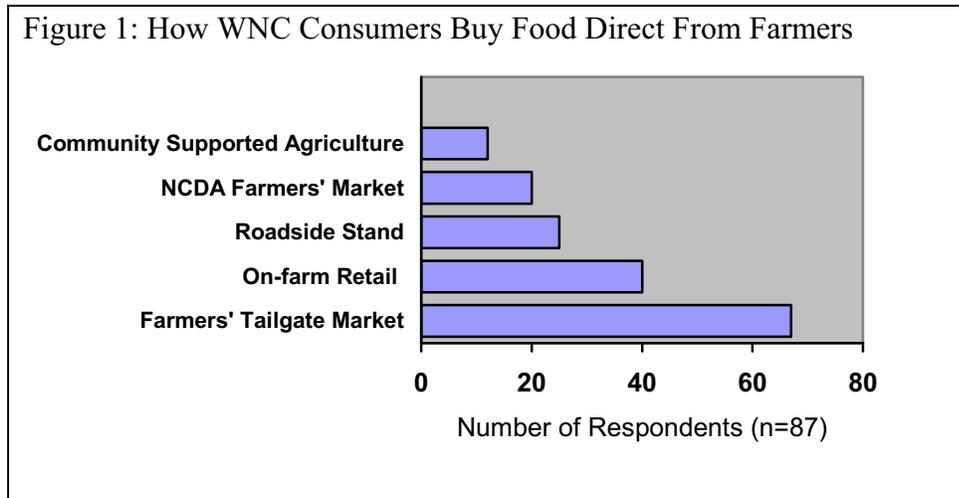
Both surveys were part of a larger research project examining interest in locally produced poultry and rabbit meat for the purpose of determining the feasibility of establishing an independent small-animal processing facility in the region. Consequently, survey respondents likely had more interest in meats than non-respondents. Also, the fact that both surveys featured more questions about poultry and rabbit than any other type of food may have skewed the results to overemphasize interest in those products.

Consumer Data

The online survey for consumers was made available on the ASAP website over a period of three weeks in the fall of 2006.¹ The survey was completed by 87 individuals who reported purchasing local food direct from farmers in a variety of ways (see Figure 1, next page.)

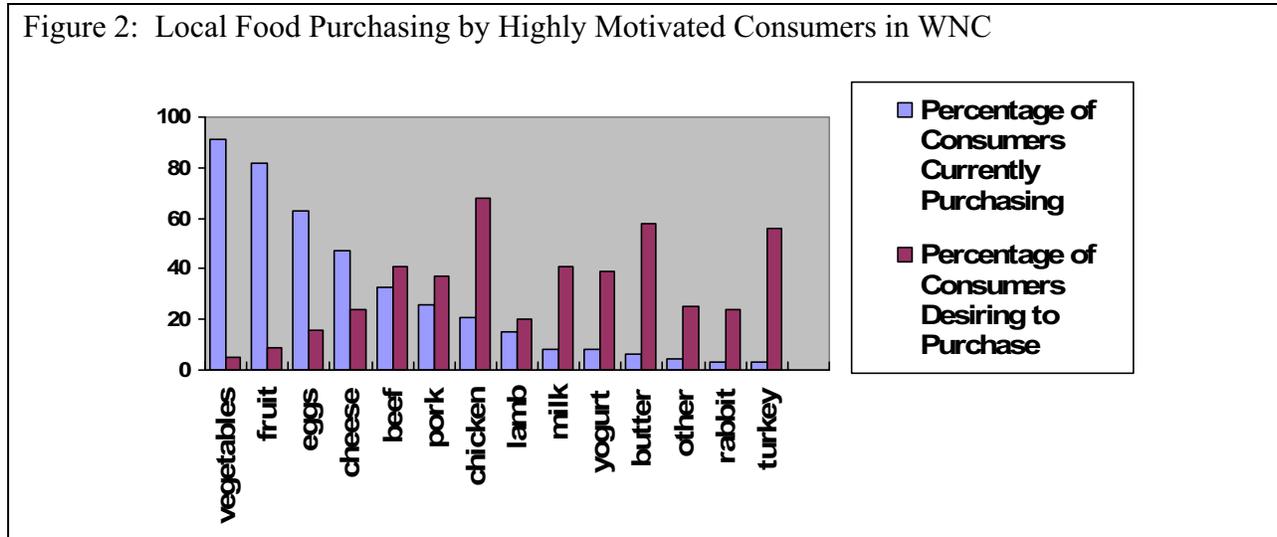
¹ www.asapconnections.org

Figure 1: How WNC Consumers Buy Food Direct From Farmers



Survey respondents were asked to name which categories of food they currently purchase and which categories of food they would like to purchase direct from local farmers. In Figure 2, this information is presented visually to show that there is significant unmet demand for most categories of meat and dairy products. The unmet demand is represented by the percentage of consumers who reported wanting a particular type of local food but not buying it. It is important to note that this data does not show whether consumers are able to get as much as they want of any particular type of locally-grown food, simply whether or not they can get it at all.

Figure 2: Local Food Purchasing by Highly Motivated Consumers in WNC



Note: The high percentage of consumers interested in poultry and rabbit meat may reflect the fact that this survey was part of a needs assessment examining interest in those products.

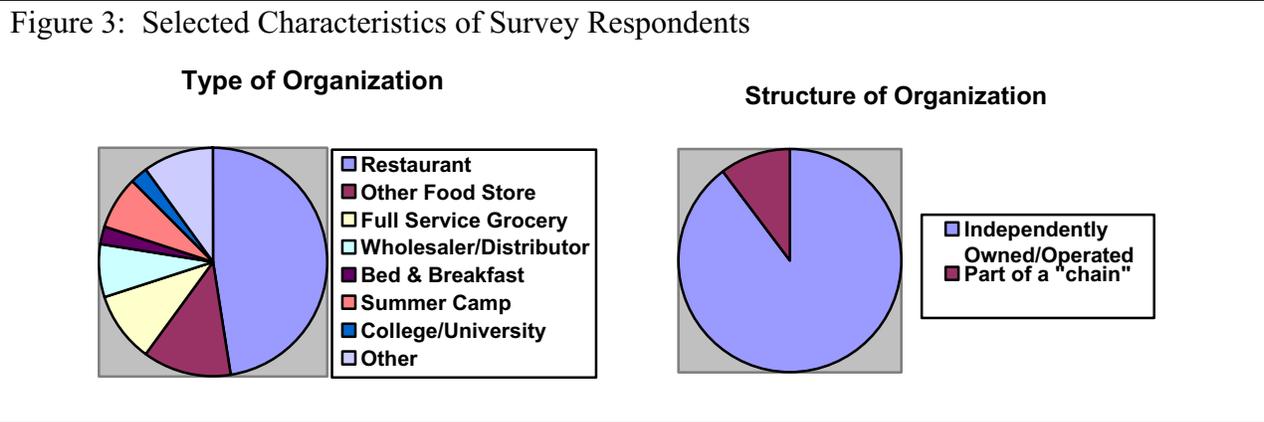
Consumers with high interest in local food reported buying fresh produce from local producers more than any other type of food, followed by eggs and then cheese. Specifically, out of 87 consumers completing the online survey:

- 91% reported buying vegetables direct from local producers;
- 82% reported buying fruit direct from local producers;
- 63% reported buying eggs direct from local producers; and
- 47% reported buying cheese direct from local producers.

Most of the foods these consumers want but are not purchasing from local producers require some level of processing – including several types of meat, milk, yogurt and butter. The lack of local processing options for WNC producers appears to be at least one contributor to demand for local food by highly motivated consumers.

Organizational Buyers

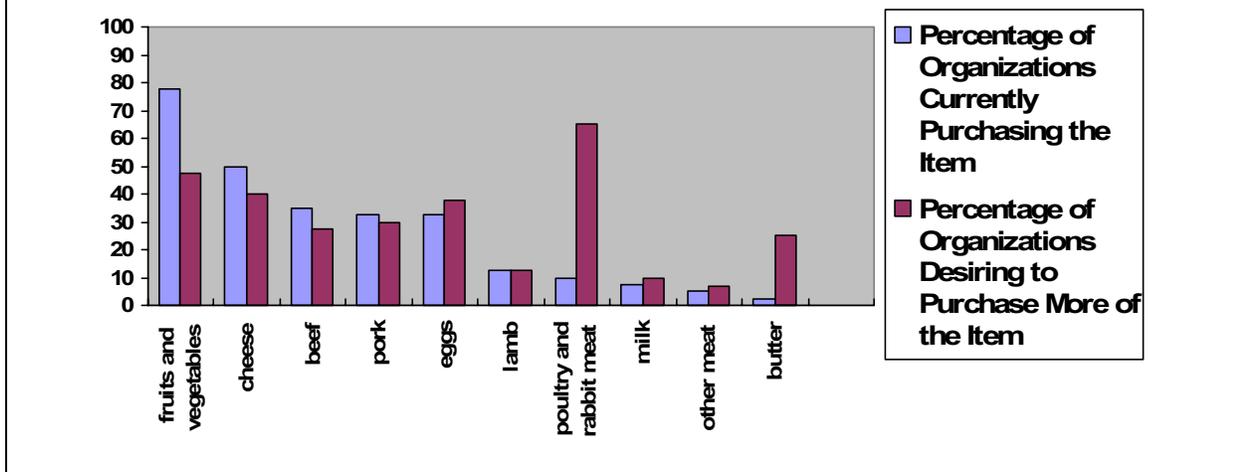
The written questionnaire was mailed to 69 restaurants, retail food stores and other food-purchasing organizations listed in ASAP’s *Local Food Guide* in 2006 as well as 33 others not in the guide but believed to have high interest in local food.² A total of 40 organizations completed the survey for a response rate of 39%. Selected characteristics of survey respondents are provided below. The high proportion of restaurants among survey respondents indicates the high number of restaurants on the survey recipient list rather than a disproportionately high response rate with that group.



As with consumers, the organizational buyers reported higher rates of purchasing local produce than all other categories of food. For this group of buyers the gap is represented by businesses and organizations who reported that they would like to buy *more* of a particular product than they are currently buying (Figure 4, next page).

² The assumption of high interest in local food is based on data collected through other market surveys conducted by ASAP during 2005 and 2006.

Figure 4: Local Food Purchasing by Highly Motivated Organizations in WNC



Note: Like the consumer survey, this survey was part of a needs assessment determining interest in poultry/rabbit meat. The high percentage of potential buyers interested in those products may reflect the extra attention given those products in the survey.

For each category of local food named on the survey there were at least some organizations who reported that they would like to purchase more of it. Even for foods like fruits and vegetables – which are able to move from farm to market pretty well – there is significant unmet demand reported by these buyers. The data suggest that even beyond the need for greater local processing of locally-grown foods, there are other issues preventing the supply of local food from reaching organizational buyers.

Barriers

Data highlighting organizations’ perceptions of barriers and motivators regarding local purchasing are useful in evaluating the relationship between *interest* in local food and local food purchasing *behavior*. As this research was part of a larger assessment of potential demand for poultry and rabbit meat, organizations were asked to rate various barriers to buying locally produced poultry and rabbit meat. Although some barriers may be specific to buying meat from local producers, it is reasonable to assume that similar barriers could apply to other types of food. Using a scale from 1 to 10, a higher rating represents a bigger challenge or a more significant barrier (see Table 1).

	Average Rating
Coordinating purchase and delivery	6.2
Price	6.0
Obtaining sufficient local product supply	5.8
Need for standard packaging/product size	5.4
Food safety concerns	4.3
Quality of food	3.9
Contracts/company policies	3.7

Similarly, survey respondents were asked to rate motivators or reasons why they might be interested in purchasing locally produced poultry or rabbit meat (Table 2). In this case, higher ratings indicate more compelling reasons.

	Average Rating
Supporting local farmers / the local economy	9.5
Higher quality food	8.9
Producer practices (i.e., naturally or humanely raised animals)	8.6
Meeting demand from customers for local food	7.8
Differentiation from competitors	6.9

Conclusions

The data presented in this paper confirm that there is a gap between the amount and/or type of local food that highly motivated consumers and businesses in Western North Carolina are interested in buying and the amount and/or type of local food they are actually buying. For meat, dairy and other processed products, processing is likely part of the problem. Other significant barriers for organizational buyers may include difficulties associated with coordinating purchase and delivery, price, and the availability of locally-grown foods.

Better information about the influence of barriers and motivators on local food purchasing behavior is needed. This information is critical in evaluating the market potential for locally-grown food in the region. If locally-grown food is available but the quality is lacking or the price is too high, for example, even the most interested organizations may not buy it. Similarly for consumers, issues like price, convenience and quality may be more important determinants of purchasing behavior than interest.

A Survey of Licensed Dairies

in

Western North Carolina

Prepared for:



by

Laura D. Kirby

April 2007

The Appalachian Sustainable Agriculture Project (ASAP) is a nonprofit organization dedicated to sustaining farms and farming in Western North Carolina (WNC) through programs and services designed to promote local consumption of locally-grown food and farm products. Since 2003 ASAP has conducted a series of surveys and other research designed to assess the food and farm economy in the region, with an emphasis on expanding local markets for local farm products.

Among other things, the research shows that despite strong demand only a small fraction of all food produced in the region is currently consumed locally. The reasons for this disconnect between local demand and supply are many, but one set of issues involves the region's food processing and distribution system. These issues are particularly relevant for certain types of foods, most notably meat and dairy products which must be processed before they can be consumed.

To gather basic information about dairy farms in WNC and examine trends and issues affecting the future of dairy farming in the region, ASAP commissioned a survey of dairy farms in the fall of 2006.¹ For the survey, a written questionnaire was mailed to 68 licensed dairies using a list compiled by the NC Division of Environmental Health. A total of 29 surveys were returned, for a response rate of 43%.

Survey Results

Dairy farming in the region is by and large a family operation. One hundred percent of dairy farmers completing the survey identified their farms as family farms.² More than 90% also reported that their family had been operating the dairy for 30 years or more. Given this long history of dairy farming in the region, the fact that more than a third of survey respondents indicated they might not be able to continue operating the dairy for long is worth noting. Reasons given by farmers for the likelihood of selling or closing down their dairy operation included things like extremely low prices paid for milk and pressure from developers interested in buying their land. A nearly 70% decrease in the number of dairy farms in NC from 1,139 in 1985 to 350 in 2005 provides evidence that dairy farming in the state is in a significant period of decline.³

Most of the dairy farms in the region are relatively small. More than three quarters of dairy farmers completing the survey reported average herd size of fewer than 200 cows. Only one could be considered large, reporting an average of 800 cows in inventory. Average annual milk production of 20,475 pounds reported by the 29 dairies surveyed was somewhat higher than the state average of 18,611 pounds in 2005, though only two dairies reported that they currently use

¹ Western North Carolina is defined here as the 23 counties included in the Advantage West economic development region. The state of North Carolina is divided into seven regions for economic development purposes.

² In the survey, a family farm was defined as one in which the family holds financial responsibility, takes the risks and provides the majority of management decisions for the farm.

³ Agricultural Statistics Division, North Carolina Department of Agriculture & Consumer Services.

the growth hormone rBST.⁴ Total annual milk production in the region can be estimated as just over 252 million gallons.⁵

Dairy farmers in the region typically belong to one of three dairy cooperatives: Dairy Farmers of America, a national cooperative; Piedmont Milk Sales Inc., a milk broker; or a regional cooperative, the Maryland and Virginia Milk Producers Association. Fluid milk processors and processors of other dairy products contract directly with these organizations for much larger amounts of milk than any individual farmer could provide. This arrangement fits within the Federal Milk Marketing Order program, which is designed to stabilize market conditions and benefit both producers and consumers.⁶ The program assures that dairy farmers receive a reasonable minimum price for their milk throughout the year. For consumers, it guarantees an adequate supply of milk and helps prevent wide price fluctuations during periods of heavy and light milk production.

According to producers, organic milk production is not practical in the region right now. This is important because of growing demand for organic milk nationwide and the possibility that farmers could earn a premium by selling milk certified as organically produced.⁷ The cost of grain and the lack of availability of organic grain were the top two barriers rated by survey respondents regarding organic milk production. Other barriers given high ratings include (in order) the expense of transitioning, the certification process, and concerns about the health of the herd. Overall, only four dairies completing a survey expressed interest in producing organic milk. That compares to 24 dairies – 83% of all dairies surveyed – that answered yes when asked whether they could benefit from a labeling or promotional program identifying their milk as locally produced.

According to the survey, sources of support for dairy farmers are varied. Interestingly, private feed consultants and nutritionists – typically representatives of proprietary firms – were rated as the most often used source of support by dairy farmers, followed by (in order) the Farm Services Administration, the North Carolina Cooperative Extension Service, the North Carolina Department of Agriculture, and the Farm Bureau. Only two dairies reported that the North Carolina Dairy Association is a source of information and support.

Context⁸

Dairy farms are more specialized than most other types of farm operations and accordingly have particular equipment and facility needs. Dairy farmers require facilities to milk cows and to store milk and cool milk. They also need the equipment to test milk for antibiotics, bacteria, and somatic cell counts before it is picked up by milk haulers who are either independent operators and charge farmers a pick up fee for their services or who are vertically integrated with dairy

⁴ The hormone, made by the agricultural company Monsanto and designed to increase a cow's milk supply, was approved by the FDA in 1993.

⁵ Production data is derived from USDA Agriculture of Census data (14,287 milk cows in WNC in 2002) combined with production statistics provided by NCDA (17,766 average annual milk production per cow in NC in 2002).

⁶ *Federal Milk Marketing Orders*. Agricultural Marketing Service, USDA. www.ams.usda.gov/dairy/orders.htm.

⁷ Dimitri, C. and C. Greene. *Recent Growth Patterns in the U.S. Organic Foods Market*. 2002. Economic Research Service, USDA..

⁸ See Miller, J. J., and D. P. Blayney. 2006. *Dairy Background*. USDA/Economic Research Service for a more in-depth discussion of issues and data in this section.

processing facilities. Dairy farmers also tend to have fewer sources of off-farm income than other farmers making them more dependent on farm-generated income. Taken together, these factors make dairy farms particularly susceptible to price volatility, which has been severe in the industry in recent years.

The dairy industry has experienced similar consolidation and concentration as other farm sectors. From 1970 to the early 2000s, the number of dairy operations in the U.S. decreased from about 650,000 operations to about 90,000 and average herd size increased five-fold from 20 cows to 100 cows. Each year more milk is produced on fewer farms. While operations with 500 or more milk cows represented only 3.7 percent of all dairy farms in 2004, they produced 47 percent of the milk. Consolidation has also occurred in processing and fewer firms are processing raw milk into fluid milk and other manufactured products.

The dairy industry has also seen changes in product demand. In 1975, fluid milk products represent 50 percent of milk utilization. Today, about one-third of milk is processed into fluid milk and cream products, and the remaining two-thirds is processed into a variety of dairy products including cheese, yogurt, butter, ice cream, dry or condensed milk, and whey products used primarily as ingredients in processed foods. Cheese in particular has become the dominant end-product for raw milk; a little over half the milk supply is processed into nine billion pounds of cheese annually. Increasing demand for cheese as well as for butter and other manufactured dairy products reflects a shift in the dairy market from retail sales to restaurant and food processor sales. Food processing and away-from-home eating now account for the majority of dairy product usage.

Discussion

Dairy farming in the region is in a period of decline. The trend is likely to continue based on comments from survey respondents about financial pressures affecting the future of their operations and other challenges related to the current dairy industry environment. The small size of dairy farms in WNC also makes them vulnerable to industry concentration and consolidation.

Interest is high among regional dairy farmers in the idea of differentiating locally produced milk. The logistics of such a program are complicated based on the fact that milk is marketed cooperatively and pooled during production. Future research should focus whether a local label could add value to milk and how local labeling could be achieved given the realities of milk production and distribution.

*The Value of Appalachian Grown™ Labeling for
Nursery Growers in Western North Carolina*

Prepared for

the Appalachian Sustainable Agriculture Project



by

Laura D. Kirby

with support from

the Environmental Learning Center of Warren Wilson College

September 2006

Introduction

Increasing local consumption of locally-grown food and farm products has been a primary goal of the Local Food Campaign (“the Campaign”) conducted by the Appalachian Sustainable Agriculture Project (ASAP) since 2000. ASAP has used multiple strategies to achieve that goal, including public education and promotional work, farmer training and support, focused farm-to-school programming, and publishing and distributing the *Local Food Guide*, a comprehensive guide to food and farms in western North Carolina. While ASAP’s primary focus area is the 23-county region known as Western North Carolina (WNC)¹, many Campaign activities extend beyond those boundaries. In 2006 ASAP introduced the *Appalachian Grown*TM logo for certifying farms and farm products grown or raised in Appalachian counties.

Nearly 20% of harvested cropland in the region was used to grow Christmas trees and all categories of nursery crops in 2002, the most recent USDA Agricultural Census year. More than 29,000 acres were used for growing Christmas trees and over 12,000 acres were used to grow all other categories of nursery products. Together, sales of Christmas trees and other nursery crops accounted for just over 30% of the \$543 million cash receipts from farming in the region. Christmas tree sales contributed approximately \$56,000 to the total, and sales of all other nursery crops generated nearly \$111,000 in cash receipts.

To explore the question of whether non-food crops could benefit from a “buy local” campaign similar to the one used for promoting locally-grown food, ASAP commissioned a survey of farms producing nursery crops in the region during the summer of 2006. The goals of the survey were to explore the applicability of the *Appalachian Grown*TM designation for trees, shrubs and plants grown in the region and to explore interest among producers of those crops in using the *Appalachian Grown*TM label.

Given substantial differences in how Christmas trees and other types of nursery products are produced and marketed in NC, the decision was made to limit the survey to nursery growers that were not exclusively selling Christmas trees. Nearly one quarter of all Christmas tree growers in NC market their products direct to consumers through choose and cut operations,² for example, and Christmas tree growers already use one type of local label to market their products. That label, “The Perfect Christmas Tree,” was developed by the NC Christmas Tree Association and is used widely by regional growers to promote locally-grown Fraser fir.

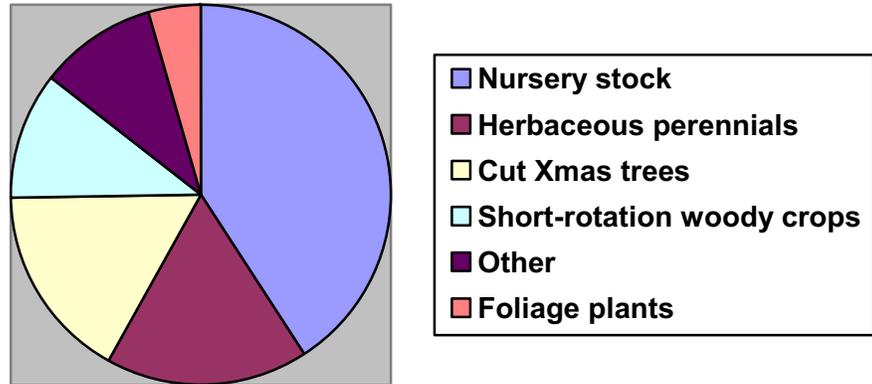
For the survey, a mailing list was generated using directories from various trade organizations and from the NC Department of Agriculture and Consumer Services producer database. A total of 469 nursery growers were identified and mailed a written survey asking about the products they grow and issues related to using the *Appalachian Grown*TM label. 109 surveys were returned for a response rate of 23%. Results from 100 usable surveys are presented below.

¹ Western North Carolina is defined as the 23 counties included in the Advantage West economic development region of the state: Ashe, Alleghany, Avery, Buncombe, Burke, Caldwell, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania, Watauga, Wilkes, Yancey.

² NC Christmas Tree Association. “Tree Facts,” www.ncchristmastrees.com.

Descriptive information

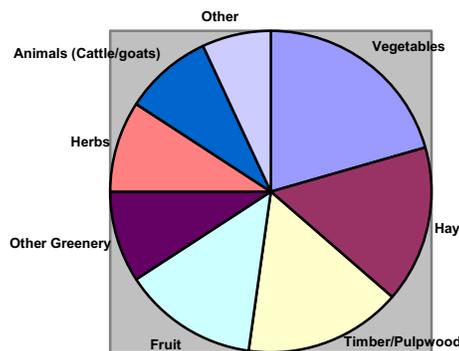
Figure 1: Nursery Crops Grown by Survey Respondents (n=100)



Total Acres: 5427
 Median Acreage: 5
 Average Acreage: 54.3
 Range: .10 to 1170 acres

More than half of all farms surveyed raise plants on fewer than 5 acres, which is not surprising given the smaller size of WNC farms in general. Only three farms responding to this survey were large, each of those operating on 1000 or more acres. Nearly a third of the nursery growers reported that they also grow other types of farm products (see Figure 2). Non-nursery crops grown by those farms include timber and pulpwood as well as small quantities of food crops. Food production mainly includes fruits and vegetables grown for home consumption or for direct sale to consumers.

Figure 2: Non-Nursery Items Produced by Survey Respondents (n=34)



Total acres for non-nursery crops: 2690 Average acreage: 79
 Median acreage for non-nursery crops: 15 Range: 1 to 1000

Determining the Value of a Local Label for Nursery Products

In order for *Appalachian Grown*TM or another similar label to be useful for nursery products grown in the region, several conditions must be met. First, there must be a sufficient quantity of products that meet an accepted definition of locally-grown. There must also be interest among growers in using the label. And there must be markets where the label adds value to the products being sold. Each condition is considered in turn below.

Definition of Appalachian Grown

In consultation with farmers and professionals working with farmers, ASAP developed a set of criteria for *Appalachian Grown*TM certification. A definition of *Appalachian Grown*TM nursery plants and trees is included as item four in the list of criteria (see Figure 3). Of 100 survey respondents, more than two thirds indicated that at least 90% of their products would meet the proposed definition. Only one grower indicated that none of their products would meet the definition.

Figure 3. Producer Certification for *Appalachian Grown*TM Farms and Farm Products

To become *Appalachian Grown*TM certified and market products with the *Appalachian Grown*TM logo, the farm operator must confirm the following standards:

1. The farm is located in an Appalachian county.
2. The individual certifying the farm is the farm operator.
3. Products marketed as *Appalachian Grown*TM will be grown or raised on the certified farm or on another certified *Appalachian Grown*TM farm.
4. **Nursery plants and trees marketed as *Appalachian Grown*TM have spent at least 75% of life beyond propagation or at least 1 year on the farm.**
5. For meat marketed as *Appalachian Grown*TM, the animal spent 75% of its life after weaning on the certified farm or on another certified *Appalachian Grown*TM farm.

Interest among growers

Some nursery growers expressed doubts about the ability of the *Appalachian Grown*TM label to materially benefit their businesses. Ten of 34 comments about the label expressed this type of uncertainty. Nevertheless, more than two thirds of all respondents indicated that nursery product sales could benefit from this type of advertising. Overall, more than 60% of respondents indicated they would like to be contacted about *Appalachian Grown*TM labeling and/or being listed in ASAP's *Local Food Guide*.

Markets

Currently, 57% of nursery growers completing a survey sell to retailers, wholesalers or consumers within the region and 61% sell to retailers, wholesalers and consumers in other regions. When asked about their interest in expanding sales to local markets, more than 70% of respondents scored their interest as 8 or higher on a scale from 1 to 10. Three areas of concern were identified as barriers to achieving a higher volume of local sales.

The first two concerns focused on consumer awareness and avenues for selling nursery products locally. Eighteen of 77 (24%) responses to a question about barriers to increasing local sales of nursery products focused on advertising issues and the question of whether or not consumers would be able to distinguish local from non-local products. Eight of 77 (10%) responses focused on the fact that there are few ways to sell nursery products direct to consumers in the region.

The third area of concern described by nursery growers involves market forces like supply and demand. More than 45% of responses named issues related to the mismatch between supply and demand for nursery products in the region. References to competition from so-called “big box retailers” fit within this category, as did numerous references to price and competition from other local growers and comments like “oversupply” and “low demand.” The growers described a situation where local demand for nursery products lags far behind the level of supply. Interestingly, this is in contrast to the situation with food crops, where local demand for fruits and vegetables exceeds the supply of fruits and vegetables or is not connected well with supply.³ As in the fruit and vegetable market, this issue is complicated by the question of what infrastructure is needed to connect local farm products with local markets.

Conclusions and Implications

The data suggest a need to differentiate locally-grown nursery products as a way to strengthen demand for the products. Enrolling nursery growers in the *Appalachian Grown*TM logo program may be one way to accomplish this. Partnering with the NC Christmas Tree Association to replicate successful components of their labeling program may be another effective strategy.

In the short term, it will require minimal investment of time and resources for ASAP to expand its Local Food Campaign to include nursery products. Options range from adding a category for nursery products to the online version of the *Local Food Guide* to adding a section for nursery products in the print version of the guide to developing an all new guide for nursery products to be sent out through existing distribution channels. As for markets, there exist opportunities to market nursery products on a small scale through any of the nearly three dozen farmers tailgate markets currently affiliated with ASAP’s campaign. Longer term, entry requirements for larger scale markets like retailers and landscapers will need to be explored. Recognition of the value of “locally-grown” in those markets would be essential to success of the *Appalachian Grown*TM logo for nursery growers.

³ *Expanding local markets for WNC farm products: A preliminary report.* 2006. Appalachian Sustainable Agriculture Project, Asheville, NC.

A Survey of Local Food Activities

in the

Southern Appalachian Region

Prepared for
The Appalachian Sustainable Agriculture Project



by

Laura D. Kirby
Allison Perrett

January 2007

Introduction

Professionals working to strengthen local food systems are well aware of the difficulty of defining local. For some, local is defined by city or state boundaries. For others, local refers to an area within a radius of 50 or 100 miles from the place where the food is consumed. Still others define their areas using a “foodshed” framework, a term borrowed from the concept of a watershed and used to describe the flow of food from areas where it is grown to places where it is consumed. Using that framework, a local food system may be very small or encompass several states depending on how much food is produced in a particular area.

While important in determining how resources are allocated and where to focus energies, boundaries for local food systems are somewhat artificial. The reality is that each “local” area blends and overlaps with others. Organizations operating in neighboring localities will likely be dealing with an identical or similar set of challenges and may develop identical or similar strategies to address them. Collaboration among these types of organizations is important for several reasons. It allows for reciprocal learning, minimizes unnecessary duplication of resources, and creates opportunities for each organization to accomplish more than it could alone.

As part of a food and farm assessment of Western North Carolina (WNC), the Appalachian Sustainable Agriculture Project (ASAP) investigated similar organizations in neighboring localities through a survey of program directors. The goals of the survey were:

- to identify existing and emerging buy local food campaigns in the Southern Appalachian region¹;
- to explore interest among like-minded regional organizations in forming a learning community to share ideas and information; and
- to identify barriers and opportunities related to rebuilding strong local food systems in the region as perceived by organizations involved in that work.

A networking approach was used to identify organizations for the survey. North Carolina Cooperative Extension (NCCE) agents representing 100 counties of Southern Appalachia were contacted by e-mail and asked to provide information about organizations or projects focused on promoting local food and farming. At the same time, ASAP developed a list of such organizations it had encountered during three years of operating a Local Food Campaign in the region. Organizations identified through these two avenues were in turn asked to name other organizations working on local food issues in the region. Only organizations for which strengthening the local food system was considered a number one or two priority were included in the survey.

¹The Southern Appalachian region encompasses the southern portion of the Appalachian Mountain chain and includes counties in parts of Georgia, Kentucky, North Carolina, South Carolina, Tennessee, Virginia and West Virginia. Moving up from local to regional, this is the area ASAP identifies as its project area. A map of the full Appalachian Region and its counties is available from the Appalachian Regional Commission (www.arc.gov).

The Organizations

A total of 22 organizations concerned with rebuilding their local food systems were identified and interviewed for the survey.² Their activities range from public education and promotional work to policy advocacy to grower education and assistance. The list includes nonprofit organizations, farmer cooperatives and university-based groups. It includes organizations that cover one or two counties as well as those that cover entire states or larger regions. Appendix 1 provides an overview of the organizations and their work as described by program directors. While an effort was made to include as many organizations in the region committed to strengthening local food systems as possible, it is unlikely that this list includes all such organizations in the Southern Appalachian region. NCCE agents in particular are not included here because of a separate survey to that group as part of ASAP's comprehensive research project assessing the food and farm economy of Western North Carolina.³

Local Food System Barriers

Program directors were asked to describe gaps or barriers related to rebuilding strong local food systems in the region. A total of 66 barriers were named and are listed in Appendix 2. From the responses, several themes emerged. The majority of comments fell into three broad categories – *the structure of the national/global food system; infrastructure; and grower education and support* – which are discussed in detail below.

A number of program directors also cited the need for more public education and awareness about local food, mostly in terms of helping consumers know where to find local food and knowing how to differentiate it from non-local food. A few recognized limitations related to the region's climate and geography including, for example, the fact that most fruit and vegetables produced in the region cannot be grown during winter months. Three respondents named the aging of the farm population and the need for replacement farmers as critical issues affecting the future of local food systems in the region.

Structure of the National/Global Food System

This category was used for high-level issues such as national farm policies or the structure of the predominant food system which favors large, corporate producers. Comments ranged from “the way the farm economy works” to “the distribution system that does not favor local food” to “corporate agriculture.” Also included here were comments referring to poor food access for low income communities, the lack of resources for organizations working to rebuild local food systems, and financial pressures facing farmers. These issues are grouped together partly in recognition of the fact that they are larger problems that will require interventions beyond the local level. Two thirds of all Program Directors made a comment of this type, suggesting that local organizations need to be devoting more attention to policy advocacy efforts.

² ASAP was included as one of the organizations interviewed.

³ see www.asapconnections.org/special/research/index.html for a description and more information.

Infrastructure

More than half of all program directors named infrastructure as a barrier to strong local food systems. According to survey respondents, infrastructure includes physical things – like trucks, cooling, processing and packing facilities – as well as less tangible elements of food production and distribution. The shortage of independent facilities for meat and poultry processing was emphasized, although difficulty entering the mainstream food distribution system was named as a barrier for small farms in general. One program director described infrastructure as “everything from processing through distribution through even a culture that looks locally for food.” A number of organizations described interventions aimed at reducing infrastructure barriers, including the development of shared-use commercial kitchens and incubators, mobile processing units, and helping to establish an independent, government-inspected poultry processing facility in North Carolina.

Training, Education and Support for Farmers

When referring to the need for farmer training, education and support, several respondents made comparisons to the type of support that has been provided to farmers by NCCE for many years. The implication was that NCCE is not providing the same type of technical support in dealing with disease or pest issues for small-scale sustainable farms – which are typically major players in local food systems – as they have historically provided for growers of commodity crops.

Some respondents focused on the need for farmers to have information about market requirements within the local food system. In other words, they need information about packaging requirements, quality standards, delivery parameters and similar characteristics for local markets such as restaurants, food stores and institutions. Other respondents suggested that farmers need actual assistance with marketing their products.

Overall, slightly less than half of program directors made some comment that fell within the broad category of training, education and support for farmers. More than half of the 22 organizations included in this survey currently provide some type of direct assistance to farmers.

Local Food System Strengths

Strong demand was overwhelmingly the top category of asset named by survey participants regarding local food systems in the region. Survey respondents described strong demand from both consumer markets and larger-scale markets. One program director summarized this sentiment by acknowledging that “Demand is high, this is generally not a hard sell.” Another said, “There is a larger market than was originally anticipated – that includes mainstream grocery stores.” More than two thirds of survey respondents made some reference to strong demand for local food when asked to name strengths of the local food movement in Southern Appalachia.

Beyond demand, many survey respondents named characteristics of the region’s farmers as advantageous for local food systems. Almost half of survey respondents included a comment in this category. Examples include “Farmers here are progressive” and “Farmers here have been able to make transitions throughout history – this one should be manageable too.”

Survey respondents also acknowledged that characteristics of the region's farms are advantageous for strong local food systems. In particular, they acknowledged that the region's farmland is suitable for growing a wide variety of crops, that the climate affords a long growing season, and that there is still a significant amount of land in production or with good potential for being in production in the region. Other program directors referred to the beauty of the region's farms and farmland as regional assets in terms of their value for tourism.

Finally, many survey respondents recognized the strong network of nonprofit and university-based organizations working on local food issues as a real strength for the region in terms of rebuilding local food systems. One respondent summarized this by saying "We have many committed, determined people working on it." Specific references were made to NCCE as a source of support for farmers within this category.

Opportunities for Collaboration

Every organization participating in this process indicated an interest in becoming part of a learning community or network of organizations working on local food projects in Southern Appalachia to share best practices, lessons learned and information. When asked for suggestions about how such a learning community ought to function or be organized, responses varied in the extent to which they were structured or informal, and whether or not they required face-to-face interaction by the organizations. The list of the ideas generated by survey respondents includes:

- At a minimum, send each other newsletters and publications announcing activities and events;
- Provide an opportunity for these organizations to get together physically at a workshop or conference on regional issues, with lots of opportunity for informal networking;
- Share models of success through a list-serve or similar web-based format;
- Collaborate on trainings and workshops such that different organizations cover different topics and issues rather than duplicating each others' efforts;
- Break up into designated "Task Forces," where different organizations tackle different issues (policy topics vs. farmer training and support vs. basic public education vs. infrastructure development, for example);
- Form a new coalition of Local Food Campaigns in the Southern Appalachians and meet to establish an agenda and collective plan of action;
- Work within the context of existing regional and national organizations' activities (CFSC, Kellogg, SSAWG, for example);
- Provide a forum for political issues to be discussed, including presentations to political leaders; and
- Use the presentation of ASAP's extensive food system research as a reason for the initial convening of these organizations, with time allowed for discussion and brainstorming around how the groups could work together.

Despite strong enthusiasm for collaborations of this kind, several respondents cautioned that any approach to organizing region-wide food system collaboration must take into account the limited resources (time and money) of the organizations working on these issues. Nevertheless, the

support for a group effort at finding ways to advance the local food system in the region is encouraging. These twenty-two organizations are already engaged in a long list of activities aimed at improving the ability of regional growers to sell food and farm products locally (see Appendix 1). By working to build on current successes and committing to learn from each other, these organizations can make meaningful strides towards addressing many of the barriers named in this report and realizing the vision on which their work is based.

Appendix 1: Organizations in Southern Appalachian Communities Working to Strengthen Local Food Systems

Note: The descriptions and activities included in this table came from interviews conducted with each organization's program director and not from any formal review of the organizations or their work. As program directors were simply asked to describe some of their organization's activities and accomplishments, these descriptions should not be considered complete or comprehensive.

Organization	Geographic Area	Activities and Major Successes
Alabama Sustainable Agriculture Network (ASAN)	Alabama	This organization sponsors farm tours, workshops for farmers, and field days for consumers. The organization works with universities and nonprofits throughout Alabama, providing support in the areas of grant writing and skill building. A primary goal of the organization is linking producers with consumers. Currently, the organization is collaborating with Heifer International on a farmer-to-farmer mentoring program in Alabama.
Appalachian Alternative Agriculture of Jackson County	Southeastern KY	This organization works to build infrastructure for supporting strong, high value local markets in Southeastern Kentucky. Recent successes include conceptualizing and building a multi-purpose agriculture facility with a commercial kitchen, farmers' market, and a mobile processing unit for processing chickens with a USDA inspector.
Appalachian Spring Cooperative	Northeast TN and Southwest VA	This organization provides services to farms and food entrepreneurs including marketing products (primarily value-added), providing business development services and discounted access to things like insurance, product labels and bar codes. They also work to connect local farms to local schools. The farm-to-school program emphasizes produce but includes value-added products as well. They are working to ascertain the feasibility of an all local food store with foods coming from a 3 to 4 hour radius of the store. They currently have an online catalog of local value-added products.
Appalachian Sustainable Agriculture Project	WNC and Southern Appalachia	ASAP is engaged in trying to rebuild a local food system in Western North Carolina and the southern Appalachian region by creating local, high value markets for local farm products. ASAP operates a Local Food Campaign, which involves general public education, distributing a <i>Local Food Guide</i> to locally-grown food and farm products, and other promotional work. ASAP also works in schools with kids, hoping to build the next generation of farmers. And ASAP tries to build the capacity of farmers through workshops, trainings, the development of resource materials, mentoring, one-on-one consulting, and by trying to make connections between farmers and markets that match their capacity. The organization's approach and work is informed by extensive food system research.

Organization	Geographic Area	Activities and Major Successes
Appalachian State University, Sustainable Development Program	Eight counties in Northwestern NC, known as “the High Country”	This is an educational program with a research component, as well as applications for growers in the area. They have a small teaching farm to experiment with sustainable and alternative farming practices while at the same time educating students. Information gleaned from experimentation is also shared with the local farming community. Some of what is grown is sold and some is given to food banks and food kitchens in the area.
Appalachian Sustainable Development (ASD)	Southwest VA and East TN	The mission of this organization is to strengthen locally-based, environmentally sustainable, healthy food and agricultural economies in the region. The organization has two main areas of work: 1) food and agriculture and 2) forest products. Their approach is to respond to supply/demand forces within the food system while at the same time shaping demand for locally produced goods. They are involved at every step along the way “from field to table,” including growing, processing, marketing, shipping and delivering food and forest products. Through this approach they have established substantial and consistent product flow at the same time that they are working to generate demand for the products.
Blue Ridge Women in Agriculture (BRWIA)	Eight counties in Northwestern NC, known as “the High Country”	Their goals are to empower women farmers to take a major role in the agricultural sector and to give a face and a voice to women farmers. They are working to build a network of farmers (some, but not all women) and interested groups. They hold annual conferences on issues facing small family farmers and are currently working on a regional community-based food and farm assessment.
Carolina Farms Stewards Association (CFSA)	North and South Carolina	This organization has been working to establish a sustainable food system (local and organic) in the Carolinas for 25+ years. They emphasize organic based on the fact that it is measurable and clearly defined, compared to local or sustainable. This organization takes on various projects that can strengthen the system or reduce barriers within the system including, for example, the establishment of Eastern Carolina Organics. They also hold a large annual conference to address issues related to organic food and farming.
Community Farm Alliance	Kentucky	This organization provides training, business planning, referral and debt management services to small farmers. They also participate in legislative action and lobbying efforts to mitigate the force of policies that push farmers off the land. They promote agricultural diversification projects that offer viable alternatives to tobacco. They work to expand direct marketing opportunities and institutional buying opportunities for the regions’ farmers. And they are working to develop collaborative marketing, distribution, and processing channels that involve rural and urban citizens, farmers and small entrepreneurs.
Crabtree Farms	Primarily Chattanooga, TN. Also parts of GA and AL.	This organization is an urban farm and nonprofit organization. They have a 5 acre demonstration farm that is organic with 200 kinds of fruits, vegetables, and flowers. They sell locally and also use the farm to provide educational activities and raise awareness about local, sustainably produced food. They also rent plots in the garden to community members to grow their own food. The organization operates with the help of over 200 volunteers and has experienced tremendous growth in six years of operation.

Organization	Geographic Area	Activities and Major Successes
Georgia Organics	Georgia	In the 1970s, this organization was dedicated to providing grower education resources and finding common ground with agricultural agencies like NC Cooperative Extension. The focus of their work has evolved to include promotional work and general public education, as well as policy advocacy. They continue to provide workshops, conferences and educational materials for growers, while also working to advance food system policies in the state of Georgia.
Heifer International (Regional Office)	Mountains of WV, Eastern KY, Southeastern VA, Eastern TN, WNC. The Coastal Carolinas.	Heifer works to bridge the gap between Sustainable Agriculture and Hunger Relief. They hold regional conferences and collaborate with organizations on topics relevant to creating socially just, community-based food systems in the region. A current project is exploring regulatory issues in Carolinas regarding processing facilities.
Jubilee Project	14 counties in Northeast TN and 3 counties in Southwest VA	This organization helped establish a shared-use commercial kitchen and incubator (Clinch/Powell Community Kitchens), which is currently serving about 30 food producers. They also started the Appalachian Spring Cooperative, mostly for marketing value-added products. The organization supports “farm-to-school” initiatives in 9 schools in 2 counties, with plans underway to triple the number of farmers and schools in the near future. They are also working to establish an all-local foods retail store.
Maverick Farms	Area surrounding Boone, NC	This organization is a working farm that operates a CSA program. They also operate a Farm Dinner program, which is both a promotional and marketing opportunity for local farmers, and they sponsor Kids Days at the Farm, which is a way to raise awareness about local agriculture and provide opportunities for children to learn where their food comes from.
North Georgia Technical College – Environmental Sciences Program	Seven counties in North GA: Franklin, Rabun, Habersham, Stephens, Towns, Union, White.	North Georgia Technical College is part of the Georgia Department of Technical and Adult Education. Through their Environmental Sciences program they have implemented a number of activities aimed at promoting sustainable agriculture in North Georgia, including hosting workshops for local growers and setting up a demonstration site for agriculture at the college. They also hold an annual summit on sustainable and local agriculture and are pursuing the development of a local food guide for Georgia.
Partners for Family Farms	Kentucky	This organization works with elementary schools, colleges and restaurants to increase purchases of locally-grown foods. They also support farmers’ markets in their area and sponsor Harvest Festivals featuring local food. They are involved in a number of collaborative relationships/projects with existing agriculture support agencies like NC Cooperative Extension, the Farm Bureau, Kentucky Department of Agriculture and various university groups.

Organization	Geographic Area	Activities and Major Successes
RAFI-USA	Various – some projects are specific to NC and others have wider applicability	<p>RAFI provides tobacco transition assistance for small farmers, including technical assistance on sustainable growing practices and assistance accessing local markets. They work to expand local markets, primarily through labeling programs (labels indicate products that are locally and sustainably produced <i>and</i> produced in ways that ensure fair standards for laborers and others involved in producing the food). They support the development of independent local processing facilities. They work on policy issues and provide expertise on government farm programs. They provide individual farmers with financial planning and business management assistance. They promote biodiversity through research and collaboration with universities, farmers and breeders. And they partner with faith-based organizations to address the needs of the hungry in the context of the local food system.</p> <p>This organization established the Cotton Mill Farmers Market and several other farmers markets in their region. They also support a farmer cooperative that sells to restaurants and runs a CSA program.</p>
Rolling Hills Resource Conservation and Development Council	Northwest GA and Eastern AL	<p>This organization sponsors a downtown farmers’ market in Greenville, TN. It also operates a mobile farmers’ market for food-insecure neighborhoods and provides activities such as a farm day camp for kids, a chefs training program, and after school gardening and cooking activities for teens – all aimed at promoting awareness and involvement in local food issues.</p>
Rural Resources	Greene County, TN	<p>This organization uses a variety of methods to promote basic awareness and education about local food issues through its Buy Local Campaign. Activities include farm tours with local meals, sometimes at restaurants; meetings and seminars for the public; booths at fairs and festivals. The organization also works with educators in Alabama around school gardens, provides farmers’ market support and promotion; and encourages restaurants and institutions to buy locally-grown food.</p>
Sierra Club of Alabama	Alabama	<p>This organization provides education, networking opportunities, and technical assistance to farmers and others (organizations and entrepreneurs) aimed at making food and farming systems more sustainable. They have helped more than 50 community food projects increase their capacity and effectiveness. In terms of policy, the organization has helped make the USDA SARE program serve the interests of farmers.</p>
Southern SAWG	Thirteen states in the Southeast	<p>This is a university-based program which provides training to NC Cooperative Extension and other agricultural professionals and provides hands-on opportunities for students to learn about sustainable farming practices and direct marketing of farm products. The organization also sponsors an annual public forum to discuss critical agriculture issues and generate plans for addressing them. A statewide advisory group and smaller, local advisory groups work on activities generated through those forums.</p>
Sustainable Agriculture Program of Clemson University	South Carolina	

Appendix 2: Barriers and Strengths of Local Food Systems in Southern Appalachia

Tables 1 and 2 show the categories into which responses were grouped. Frequency refers to how many comments fit within each category. Beneath the tables, actual responses are included.

Table 1: Codes for Barriers named by Program Directors

Code	Description	Frequency
A	Grower Education and Support. Includes technical education and support, like information on how to grow new crops using sustainable practices. Also includes information about how to approach different markets, understanding requirements of different markets. Also includes actual assistance for farmers in reaching local markets, like a person or organization playing a broker role, or a marketing co-op.	12
B	Infrastructure. Includes processing facilities, cooling facilities, packing facilities. More generally, it includes “everything involved in getting food to consumers.”	18
C	Public Education and Awareness. This includes general education about why buying local food makes good sense (for consumers, for farmers, the region). Also includes information for consumers about where to find local food and how to recognize it as local (labeling).	10
D	“High-level issues.” This category is used for references to the predominant food system; the fact that nonprofits don’t have enough resources; the fact that low-income communities have poor access to food; the fact that farmers are not able to earn a fair price in traditional markets.	19
E	Production issues. This category is used for references to the fact that WNC is significantly affected by seasonality, and that the region’s (small) farmers may not be able to produce a sufficient, steady supply of some crops for some markets.	7
F	Aging of the farm population and replacement farmer issues. Includes pressure for farmers to retire (development pressures).	3
	Total number of responses	69

Table 2: Codes for Strengths named by Program Directors

Code	Description	Frequency
A	Strong markets. Both strong demand from consumers and good restaurant, organizational, institutional markets.	19
B	Characteristics of farmers/residents. Adaptable, loyal, strong character, etc.	14
C	Characteristics of farms. Includes references to good soil, climate. Good crop diversity. Also includes references to the natural beauty of the farm landscape.	15
D	Strong support system for the local food movement – includes references to nonprofits, university groups and extension. (ie, “A lot of good folks working on these issues”)	10
E	Infrastructure. Respondent noted that some infrastructure already exists in the region that can be adapted for local food system.	1
	Total number of responses	59

Actual Responses (Gaps and Barriers):

- The lack of community ownership of distribution, wholesale, and retail of local food products. In expanding beyond direct selling to consumers into regular patterns of retail purchasing, it is difficult to maintain the commitment to local food and local food for a fair price by wholesale/retail entities.
- The infrastructure is not there with consolidation and centralization in the food system.
- No technical assistance (i.e., business planning) from universities or the Department of Agriculture.
- The way the farm economy works.
- Low income communities lack access to healthy foods.
- Policy: the sustainable agricultural movement has been terrible about addressing and understanding policy.
- The absence of independent processing facilities. In the state of North Carolina, for example, there are only eight independent poultry processing facilities. North Carolina farmers need resources to further process food products, they need cooling facilities, packaging facilities, etc.
- The lack of capital for new farmer enterprises that will serve local sustainable agriculture.
- Labeling: consumers need a way to identify the values they want to support. We need to be thinking more regionally with food systems.
- The distribution system that does not favor local food.
- The focus of universities and academics: universities need to focus their dollars and resources more on issues relevant to local communities and local food systems.
- Market mechanisms: we need more market-based mechanisms in place to aid farmers, from the organizing of cooperatives to help with the coordination of selling to large retail chains.
- The lack of practical farming knowledge in terms of people who have land and want to farm but don't have the know-how.
- There is a gap between production and markets in terms of meeting the demands of particular markets. There are issues related to distribution and the criteria that markets require: packaging, quality standards, logistics like refrigeration, delivery, etc.
- Educating eaters/consumers to understand where food comes from and what the effects of the industrial food system are.
- Infrastructure: the consolidation and centralization of marketing, transportation, storage and processing is a barrier.
- Marketing systems for farmers. For farmers it's all they can do just to produce. They need education and training in better entrepreneurial marketing techniques. And for farmers that are not going to market their product, they need to be paired with partners who will do the marketing of their products, i.e., coops.
- Public awareness.
- Accessibility issues: the ability to access the markets themselves. For example, the school system in their area has not been supportive of local (although parents are). Food also needs to be accessible in terms of location—food needs to be where the public shops.
- Accessibility to local food for low income community members.
- Changing lifestyles: we need to access children as they are growing up and developing habits; we can impact lifestyle most dramatically early in life.
- The resources to identify who's growing food and what they are growing; there is a gap in knowledge about what's being grown by whom in the region.
- So many nonprofit organizations competing for same resources.
- Main challenge is helping people find out where they can buy local, sustainably produced food.
- Need more research/education for farmers as far as switching to sustainable practices.
- Sometimes it's a challenge to fill CSA shares or meet a restaurant's needs given the small number and small size of farms in the region.

- Affordable access to sufficiently large retail markets.
- “Moms and pops” are easy, but farmers can’t sell to big grocers and get a reasonable price.
- Infrastructure of supply/distribution, especially regarding institutional buying.
- Funding (not enough).
- Need for research to show economic impact and catch attention of those in power/with money.
- Most of the farmers in this area are small family farmers. Major challenges for them are infrastructure-related (transportation, distribution, etc.) because they are generally dealing in smaller quantities than commodity farmers.
- Institutional markets are poorly developed for local farmers because generally institutions don’t think it’s worth the effort to work with local farmers and/or they don’t perceive demand from their customers for local food.
- Need more infrastructure. One type is physical infrastructure, like processing facilities and trucks -- need more for produce, but also desperately need it for meat/poultry. A second type is service or support infrastructure like the type of support that Cooperative Extension has always provided for traditional crops (esp. tobacco) – this includes research into disease/pest issues, new crops, technical/educational support, publications, workshops, etc. geared toward sustainable farming.
- Production -- need a year-round, consistent supply.
- Need to professionalize the production and distribution side of the equation.
- Infrastructure – poultry processing. Also need to consider vegetable processing centers.
- Inputs – livestock feed situation (organic grain in particular).
- Need statewide sustainable agriculture survey and strategic plan.
- Corporate agriculture.
- People no longer cook.
- Difficulty accessing local foods (grocery stores).
- Convincing tobacco farmers to grow food instead of tobacco.
- Encouraging farmers to grow a greater variety of foods.
- Farmers selling farms.
- Processing facilities (particularly meat).
- Food security issues involving low-income communities.
- Need for more community organizing, grassroots groups.
- Awareness: local farmers are not aware of market potential. They need that kind of awareness so that they will utilize the land to grow things to sell locally. They need also to understand the benefit of local branding. Farms need to diversify their crop base because there is big gap in what is produced locally and what is consumed locally.
- Transportation.
- Pricing: competitive in the marketplace but also fair to farmers.
- Tying crop production to tourism.
- They lack necessary infrastructural components like trucks to move produce from farms to retail outlets and also an adequate central location designed to house produce for farmers to take their produce before it goes into the market stream.
- They have no money for a marketing director to mediate between farmers and various food outlets.
- Another concern relates to the next generation of farmers. Development pressure is tremendous.
- Making local healthy food accessible to all population segments; we can’t have a “yuppified” local food system.
- We have lost a lot of the infrastructure to support local, which includes everything from processing through distribution through even a culture that looks locally for food.
- Consumers want locally-grown food, but it’s hard to get it to them and hard to identify it as local so farmers are getting the true value of local.

- Our market is flooded w/ cheap food that is faceless and placeless; we need to put face and place on food for consumers.
- Access to land; prices are going up.
- Age of farmers -- replacement farmers is going to be a big issue.
- Local market infrastructure creates uncertainty for local farmers.
- Funding for our organization has been a major hurdle.
- Supply: the number of farmers in the area is small and the size of the farms is small; they are not able to meet the demand for locally produced food especially for large institutional buyers
- People want a year round supply and locally produced farm goods are seasonal.
- Infrastructure: the absence, for example, of warehousing facilities. This is where the bottleneck lies.
- Development pressure.
- The difficulty of making locally-grown food available to all income levels and not just higher income levels -- this gets into larger issues like the living wage, the expectation of cheap food which doesn't reflect what it costs to grow food, and the price we all pay somewhere down the line.

Actual Responses (Strengths):

- The Appalachian culture.
- There is a growing awareness and understanding of the corruptness in the system.
- Neighborliness and people who care about their communities.
- The natural resources—soil and climate—of our area. We can grow a wide variety of vegetable crops especially and can supply a larger quantity of our own food.
- A traditional ethic of hard work and ingenuity. Small businesses can thrive with some business and technical assistance.
- We have a lot of effective NGOs in our area with strong missions and visions.
- We have a good base of modest size farms.
- We still have a lot of independent grocery chains.
- We have a lot of natural resources and a solid environmental base.
- In the state we have a lot of regional differentiation so that we can have a year round supply of food and lots of food variation.
- Tremendous economic opportunity for farmers -- growing urban centers with upscale residents and lucrative markets that are close also to agricultural areas. The demand for local is high and land is still relatively inexpensive in some areas.
- Capacity and weather: we have a long production season.
- A growing awareness among consumers that are thinking about food issues, where food comes from and the impacts of food production. Consumers are ready to embrace alternatives.
- We have lots of farmer's markets.
- In some areas there is a strong co-op tradition.
- Dedicated growers that are not only interested in growing food but also raising awareness and educating the public. Many are also approaching farming and marketing creatively.
- Places to grow food.
- A core group of followers; many are only one generation removed from the farm and its easy to tap into that and reconnect people with agriculture.
- Many committed, determined people working on it.
- Agricultural extension agents here are very helpful to farmers who want to learn new marketing skills, etc.
- Demand is high – this is not a hard sell, generally.
- There is a lot of demand out there for locally-grown.
- Good farmland, can grow a wide variety of vegetables and ground fruits.

- Tradition of hard work.
- Farmers able to make transitions throughout history; this one should be manageable too.
- Interest level is high among both activists, or those working in the field, and the general public.
- We have some great success stories and examples that show that it's possible for institutions to buy locally, just takes a little extra time and communication to set it up.
- We have many active and interested farmers.
- There is a larger market than was originally anticipated a few years ago. That includes mainstream grocery stores. There is a lot of public awareness and demand.
- We have a very strong market – lots of demand for local, organic food.
- Great climate for growing. We're number three in the nation as far as the diversity of crops.
- Great network of nonprofits.
- We have good partners in the land-grant institutions, community colleges, etc.
- Farmers here are progressive.
- People of North Carolina care about the state and are genuinely good and cooperative people.
- A fair amount of land still in production and equipment for farming.
- Growing awareness about diet and health problems.
- Appalachian Sustainable Agriculture Project.
- Regional nonprofits working on these issues.
- The beauty of the area:
- Historical and cultural background of the area, e.g., small towns and festivals.
- Their area is only a day trip from Atlanta.
- There are many lakes in their region which attracts recreational activities (boating) and people who want second homes.
- A lot of educational resources for growers and entrepreneurial farmers.
- A good relationship with secondary schools that have great agricultural programs.
- Enthusiastic and passionate farmers.
- Viable niches farmers can move in to, e.g. garlic and broccoli.
- Universities as resources and as sources for a new generation of farmers.
- We have farms that are able to transition to different kinds of agriculture -- their small scale means that they are not so tied to one particular commodity, they are not so heavily invested in one kind of production and are able to respond to new markets easier.
- Identifiable region that has qualities that can be tied to land and agriculture as far as marketing the region and creating a sense of locale.
- We still have some infrastructure that can be adapted to accommodate local.
- High demand here for local.
- Number one economy is dependent on scenic landscape that includes farms; that is also a challenge right now but it has a lot of potential.
- We have a head start in responding to national trends toward healthier foods and foods tied to place. We are ahead of the trend that values local.
- Variety in the landscape.
- Work ethic of the people.
- Sense of community.
- The nature of the terrain; they can grow a variety of crops in different micro-zones.
- There is still a farming base in the highlands despite development pressure—which is also a barrier.
- New development caters primarily to second home owners; second home owners are the ones who have the income and can afford to pay higher prices for local food.

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Hospital Foodservice
in
Western North Carolina:
Implications for the Local Food System

Prepared for the
Appalachian Sustainable Agriculture Project



by
Laura D. Kirby

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Nationwide, the number of health problems related to diet and nutrition is on the rise. Obesity, diabetes and heart disease are among the many preventable diseases linked to unhealthy eating habits. One response to this problem by hospitals and health centers across the country has been to offer more nutritious food choices for patients, staff and visitors, often by reconnecting with their local farming communities.

A national review of hospital initiatives related to local food found healthcare leaders “passionate” about bringing fresh, nutritious food to their patients, staff and communities.¹ That report described various ways that health care facilities were making changes to hospital foodservice. Some were purchasing locally-grown food through their contracted suppliers or working within out-of-contract percentages to maximize their local food purchases. Others had established farmers’ markets and farm stands on hospital property. And still others were working to improve the quality of food offered in vending machines on hospital property.

To determine interest among Western North Carolina (WNC) hospitals in connecting with the local farming community, the Appalachian Sustainable Agriculture Project (ASAP) commissioned a survey of area hospitals and health centers in the summer of 2006. The survey explored Foodservice Directors’ perceptions of barriers and motivators regarding incorporating locally-grown food into hospital foodservice, as well as details about how foodservice operates in the hospital setting.

For the survey, a list of 27 hospitals in WNC was compiled from the North Carolina Hospital Association member database. Phone interviews were completed with 15 hospitals for a response rate of 56%. Each hospital Foodservice Director was mailed a letter of introduction notifying them that someone would be calling to complete a survey over the phone. Follow-up phone calls were done systematically, with hospitals dropped from the list after repeated attempts to contact the Foodservice Directors were unsuccessful. This approach means that non-participation does not necessarily indicate non-interest. Rather, it may reflect difficulty reaching hospital Foodservice Directors by phone.

Foodservice Characteristics

Nationwide, 70 to 80 percent of hospitals operate their own foodservice.² For the 15 WNC hospitals surveyed, only 2 (13%) contracted foodservice through a third party. Nevertheless, nearly all were governed by contracts with vendor/distributors. Only two distributors were named by the 15 Foodservice Directors surveyed as primary suppliers of hospital food. Those two distributors – Sysco and US Foods – typically demand a high percentage of food purchases. According to survey respondents, sometimes the contract simply states that the hospital purchase “as much as possible” and other times a specific percentage is named, typically higher than 80%. Items like milk, bread and produce are often listed as items that can be purchased out of contract.

¹ *Healthy Food, Healthy Hospitals, Healthy Communities*. 2005. Institute for Agriculture and Trade Policy Food and Health Program.

² *Food Fight*. 2004. Modern Healthcare, 13 September: 46.

The average US hospital serves more than a million meals per year.³ In Western North Carolina, even the smallest hospital prepares food on a large scale. The number of meals served by the 15 hospitals completing a survey ranged from 200 to 1500 per day. According to survey respondents, hospital foodservice generally encompasses meals served to patients as well as meals served in a cafeteria or café where staff and visitors eat. Some hospitals also enter into contracts with community service agencies, such as Meals on Wheels or Head Start, to provide foodservice outside of the hospital setting.

Surprisingly, 6 of 15 (40%) hospital Foodservice Directors reported that they had purchased some locally-grown food in the past year. Items purchased included apples, sweet potatoes, and other unspecified fruits and vegetables. Those items were purchased only during the summer months and only in very small quantities relative to the total amount of food purchased, typically less than one percent. Locally-grown foods were obtained in a variety of ways – from produce stands, by delivery from local produce companies, or from regional distributors specializing in locally-grown food.

Interest

Despite differences in hospital size, whether or not foodservice was self-operated or contract managed, and whether the hospital was publicly or privately operated, there was a high degree of consistency among responses regarding interest in buying locally-grown food. Overall, 13 of 15 hospital Foodservice Directors (87%) expressed high interest in buying locally-grown food, measured as 7 or higher on a scale from 1 to 10.

Despite the high level of interest, Foodservice Directors gave high ratings to nearly every barrier named by interviewers. Not surprisingly, the highest rating was given to the category including contracts and company policies. Several Foodservice Directors emphasized that they would be limited by a contract – either with a vendor/distributor or an outside agency governing all categories of hospital purchases – regarding where they could purchase food. Foodservice Directors (particularly those with low interest in buying local food) were also quite concerned about food safety issues and the challenge of coordinating purchase and delivery when buying locally-grown food in large quantities. Issues like the need for standard packaging or product size, and the need for processed product were less important than all others.

The health benefits of fresher food and perceived higher quality of local food were the two top-rated reasons for interest in buying locally-grown food. Less important but still significant motivators included supporting local farmers and the local economy, and meeting demand from patients, staff and visitors for fresh, local food.

A few hospitals provided additional information relevant to hospital foodservice in the region. For example, the Western Carolina Health Network is an organization that addresses issues relevant to hospitals in the region and may be a good avenue for pursuing partnerships between agriculture and health care in the region. Several Foodservice Directors also named Premier, Inc. as a regional company that negotiates contracts for health care facilities, a type of gatekeeper for vendors interested in selling to area hospitals.

³ *How hospital foodservice is performing*. 2004. Foodservice Director, 15 January: 25.

Some Foodservice Directors were asked about various types of assistance that could be provided to enhance their ability to incorporate local food into hospital foodservice. Examples of assistance included information on local food programs from around the country, lists of suppliers for local products, health and safety information on local foods, regulatory information (i.e., What are the rules on buying foods direct from farmers? Is it legal?), and assistance in developing a system for buying from multiple sources. On the whole, Foodservice Directors thought all those types of assistance could be helpful. However, none was as important as the need to work within the parameters of contractual obligations.

Potential

The volume of food served by hospitals in the region is significant. In terms of spending, 13 area hospitals reported combined food spending ranging from \$7 to \$8 million per year. Assuming similar spending from the 14 remaining area hospitals, total estimated food spending by regional hospitals would be around \$16 million per year. Based on spending patterns by Group Purchasing Organizations (GPOs) that typically supply hospitals and health centers around the country, a breakdown of estimated spending by hospitals might look like this:⁴

Estimated WNC Hospital Food Spending	
Produce	\$1.28 million
Meat	\$3.52 million
Dietary*	\$1.28 million
Beverages	\$1.60 million
Dry/Canned Goods	\$6.88 million
Other	\$1.44 million
TOTAL	\$16.0 million

*Dietary includes packaged products like salt/pepper/sugar that are served with patient meals.

Just like health care leaders across the country, Foodservice Directors in this region are motivated to bring more locally-grown food into hospital foodservice in the interest of meeting hospital goals for improving the health and wellness of patients, visitors and staff. Encouraging Foodservice Directors to purchase produce from local suppliers outside of vendor contracts is one way to do this. On a larger scale, however, the key to bringing more locally-grown food into hospital foodservice is linking producers with entities like Premier, Inc., Sysco and US Foods to work within the existing framework of hospital foodservice in the region.

⁴ *Industry Census, The GPO Food Dollar*. Foodservice Director, November 15, 2006. www.fsdmag.com.

*A Survey of
North Carolina Cooperative Extension Agents
in
Western North Carolina*

Prepared for:



by

Laura D. Kirby

January 2007

North Carolina Cooperative Extension (NCCE) is a farm support agency whose purpose is to take knowledge and information from the state's two land-grant universities into communities across the state. NCCE agents working in all 100 counties of the state provide education to both the general public and the agricultural community through print materials, web-based resources, one-on-one technical support, business planning services, conferences, workshops and seminars. Structural oversight of County Centers is provided by District Directors representing seven regions of the state.

The Appalachian Sustainable Agriculture Project (ASAP) is a nonprofit organization dedicated to sustaining farms and farming in Western North Carolina (WNC) through programs and services designed to promote local consumption of locally-grown food and farm products. Since 2003 ASAP has conducted a series of surveys and other research designed to assess the food and farm economy in the region, with an emphasis on expanding local markets for local farm products. In 2006 ASAP added a survey of NCCE agents to its list of research activities, recognizing that the agents are in a unique position to understand issues affecting farmers and farming in the region.

Working in cooperation with District Directors, a written questionnaire was developed and distributed to NCCE agents ("Extension agents") in each of 23 counties of WNC.¹ Questions addressed county production, farmer attitudes and plans, and the ability of ASAP and NCCE to work together effectively toward common goals. Survey respondents were also asked to describe issues affecting farmers and the future of farming in counties where they work. Responses from 19 agents representing 22 counties were received.

Farmer Attitudes and Plans

There have been dramatic decreases in tobacco production across the state beginning in the mid-1990s when growers began anticipating the end of federal tobacco support. In the decade between 1992 and 2002, WNC experienced a 36% decrease in the number of acres devoted to tobacco and a reduction in the number of farms growing tobacco from 4,133 to 1,959.² As many North Carolina farmers exit tobacco production, there is a tremendous need and opportunity to shift farm production into different crops and markets.

In the context of a farm economy in transition, Extension agents were asked a series of questions designed to assess farmer attitudes and plans. Agents estimated that as many as 45% of farmers would exit farming over the next five years in some counties, though the average rate of exit predicted was around 16%. On a positive note, Extension agents also estimated that anywhere from 10% to 80% of farmers in their counties would respond to changing conditions by shifting to new crops, new markets or new methods of production over the next five years. On average, agents estimated that 30% of farmers in the region would make these kinds of shifts. When asked to rate the general mood among farmers in the region, agents gave an average rating of 6 on a scale where 1 equals pessimistic and 10 equals optimistic.

¹ For the purpose of this research, WNC is defined as the 23 counties in the Advantage West economic development region. Advantage West is one of seven economic development regions in the state.

² *Census of Agriculture*. National Agricultural Statistics Service, USDA.

Extension agents were also asked to rate producers' interest in selling to different types of local markets. There was considerable variation from county to county. In general, agents rated interest in selling to distributors, grocers and institutions as highest, followed by tailgate markets, the Western North Carolina Farmers' Market and then restaurants. Community Supported Agriculture programs received the lowest ratings, though even that category received a high rating from some respondents.

Recognizing that new farmers are replacing some that retire each year, the majority of Extension agents reported that the farm population would probably stay the same in their counties over the next five years. Lifestyle farmers – a category which refers to people that choose to go into farming because they like the lifestyle it affords – were rated as the top category of replacement farmers, followed by organic farmers, then retirees, next-generation farmers and finally Latino farmers. Extension agents named several barriers to next-generation farmers becoming primary farm operators, including a lack of interest in farming and the challenge of farming profitably in a global farm economy.

The Local Food System in Western North Carolina

“Local food system” is a term used to describe the entire spectrum from food production, processing and distribution in Western North Carolina to food consumption by the region's residents. Part of ASAP's mission is to enhance the local food system as a way to strengthen and help sustain the region's farms. Extension agents were asked to name strengths and barriers related to expanding the local food system in the region, and to identify infrastructure needs in each county for moving locally-grown food to local markets. The information is presented here in three separate categories -- strengths, barriers and infrastructure – all of which are important determinants of the potential for a strong local food system in the region.

Strengths

Characteristics of the region's farms made up the largest category of asset named by Extension agents. In particular, agents explained that soil and climate conditions in WNC make the region's farms suitable for growing a wide variety of fruits and vegetables. In fact, 18 of 19 agents completing a survey named at least one type of crop with good potential for new or expanded production in their county. Several acknowledged that the region's climate and soil make it suitable for growing nearly all types of non-citrus fruits and vegetables.

Extension agents also named characteristics of the region's farmers as a source of strength for the region's farm sector. Characteristics such as a strong work ethic and a willingness to try new crops or methods of production were emphasized.

Finally, many agents acknowledged that strong demand for local food and farm products is an asset for the region's local food system. Comments pointed to strong demand from both residents and tourists as well as an increase in the number of local market channels or outlets for local farm products.

Barriers

Extension agents articulated a wide range of challenges to advancing the local food system in the region. At the top of the list were the need for support systems for farmers interested in accessing local markets, and the need for specific information for producers about growing for and selling to local markets. According to survey respondents, grower education and training in this context has several components:

- One involves the need for skills or assistance regarding marketing farm products locally.
- A second involves the need for technical support and information regarding growing new crops or using sustainable growing practices – which are generally more important in local markets.
- A third area deals with information. According to survey respondents, farmers need information about packaging requirements, quality standards, delivery parameters and similar characteristics for each type of local market (i.e., restaurant, retail, institutional).

Despite being recognized as an asset for the region's local food system, demand was also recognized as a barrier. Nearly twenty percent of all responses to a question about barriers revolved around the need to promote local farm products more effectively. Specifically, agents cited poor awareness about the availability of local food, unwillingness on the part of consumers to alter their food buying habits, and lack of interest in local food in smaller counties within the region.

Other obstacles named by survey respondents focused on financial issues. These can be grouped into two categories. The first involves rising land prices related to a surge in development in the region. The second is the combination of rising input costs and falling prices associated with heightened national and global competition in food production. Of a total of 58 comments describing important issues affecting the region's farm sector, half of all responses could be included in one of these two categories.

Some less prominent but still important barriers named by agents include farmer attitudes about shifting to local markets, the seasonality of production, and labor issues. According to Extension agents, the main way that labor represents a challenge for the local food system is that it is difficult for farmers to find local farm help.

Infrastructure

Extension agents were asked to comment on infrastructure elements associated with local food production and distribution in each county. For more than two thirds of the counties, processing facilities and refrigerated storage were identified as critical infrastructure needs if the local food system is to flourish. For more than half the counties, local distributors and more local markets were identified as important.

When asked to name specific types of infrastructure that already exists in each county, most agents named farmers' markets. A few named processing and packing facilities – mainly for apples in counties where apple production is prevalent – and a few named marketing

cooperatives like New River Organic Growers (NROG), Eastern Carolina Organics (ECO) and Madison Farms.

ASAP and NCCE Collaboration

Extension agents were asked a question about how ASAP and NCCE could work together towards common goals. Both organizations are concerned with providing training, education and support to farmers interested in transitioning to new crops and local markets. Of 13 responses to this question, nearly all focused on a need for better collaboration and communication between the two agencies. In other words, rather than suggesting that there were certain tasks that ASAP should do and other tasks that NCCE should take on, most Extension agents expressed a desire for better sharing of information in the planning phase of work. Specific comments included things like: “Each make an effort to include the other in the process,” “Jointly organize and promote workshops,” and “Plan and work together.”

The main way ASAP communicates information about its programs and activities is through a web-based listserv. Although only six NCCE agents reported that they currently belong to the listserv, eleven others indicated that they would like to have their names added to the list. While this provides evidence of a relatively low level of communication between the two agencies at present, it also indicates a genuine desire on the part of NCCE to elevate the level of communication.

Extension agents were also asked to comment on the usefulness and effectiveness of ASAP’s *Local Food Guide*, a resource in both print and online formats used by ASAP to promote locally-grown food and farm products in the region. Of 19 Extension agents completing the survey:

- two reported not being familiar with the guide;
- seven reported being familiar with the guide but not using it regularly; and
- eight reported that they use the guide by handing it out at conferences and seminars and/or encouraging farmers to be listed in the guide.

When asked for suggestions about how the guide could be improved, two agents suggested greater distribution, including to larger scale buyers like restaurants, grocers and brokers. One suggested expanded listings to include value-added producers. Another suggested that the guide be updated more frequently.

County Production Data

The main source of information about farm production in WNC is the Census of Agriculture, which is conducted every five years by the U.S. Department of Agriculture. There are significant gaps in data at the county level. The USDA’s intention is to protect the confidentiality of individual producers in counties where production is limited. And because of difficulties with data collection on direct marketing of farm products, USDA data for Direct Sales are widely believed to be both inaccurate and incomplete.³

³ *Direct Marketing Today: Challenges and Opportunities*. 2000. Agricultural Marketing Service, USDA.

In the survey, Extension agents were asked to evaluate the accuracy of the data reported on the most recent Census of Agriculture and offer suggestions for improving food and farm data collected by the USDA. Eleven of twenty-two surveys listed crops that were produced in a particular county but not listed on the 2002 Census of Agriculture's county-level tables. Six suggestions were offered by Extension agents for improving USDA data collection. Verbatim responses are included in Table 1.

Table 1: What do you think could be done to improve the usefulness and accuracy of the Census of Agriculture and other USDA data?
<i>If everyone would report crops to their FSA office, this problem would be solved.</i>
<i>Include more options for reporting niche crops.</i>
<i>Network with points of sale (ie., farmers markets, tailgate markets, roadside stands). In order for them to sell "tax free" produce they must list their growers to include the acreage grown.</i>
<i>Survey of farmers' market participants</i>
<i>This will be difficult without some system that labels the origin of fruits and vegetables. More comprehensive phone surveys of farmers.</i>
<i>Work to improve the database of farmers. IRS - Schedule F filing may be one way to improve the list.</i>

Conclusion

Assessing the future of the local food system in WNC – one of the central goal's of ASAP's local food system research -- means examining farmer attitudes and plans, exploring strengths and challenges facing the region's farmers, and identifying infrastructure elements needed to move locally-grown farm products to local markets in the region. This survey of NCCE agents was a way for ASAP to collect some of that important but difficult to gather information. It was also an effort by ASAP to involve NCCE in the research process aimed at identifying ways to strengthen and sustain the region's farms, a top priority of both organizations.

The high response rate and interest by Extension agents in improving collaboration and cooperation between ASAP and NCCE was a positive finding of this research. Even more encouragingly, survey results suggest that there is good potential for expanding local markets for local farm products in Western North Carolina. According to the Extension agents, the region's highly fertile land and long growing season coupled with a strong commitment to farming by the region's farmers suggest that – despite the need to address some significant barriers and challenges to local food production and distribution – the future of the local food system in WNC is promising.

A Survey of Shoppers
at the
Western North Carolina Farmers' Market

Prepared for:



by

Laura D. Kirby

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The Western North Carolina Farmers' Market (WNC Farmers' Market) is one of five farmers' markets owned by the state of North Carolina and operated by the North Carolina Department of Agriculture and Consumer Services (NCDA&CS). The market was first opened in 1977 and currently operates seven days a week, 365 days a year. The market includes both retail and wholesale operations and is one of the largest venues for fresh fruits and vegetables in the region. It is also a place where many of the region's consumers, visitors and small businesses go to find farm-fresh food.

The Appalachian Sustainable Agriculture Project (ASAP) is a nonprofit organization dedicated to sustaining farms and farming in Western North Carolina (WNC)) through programs and services designed to promote local consumption of locally-grown food and farm products. Since 2003 ASAP has conducted a series of surveys and other research designed to assess the food and farm economy in the region, with an emphasis on expanding local markets for local farm products.

In the fall of 2006 ASAP initiated a survey of shoppers at the WNC Farmers' Market in cooperation with market staff. The goals of the survey were:

- to explore reasons why shoppers visit the WNC Farmers' Market;
- to examine shopping and spending patterns among shoppers at the market; and
- to gauge awareness among market shoppers about the *Local Food Guide*, which is the main way ASAP communicates information about local food and farms to consumers.

Surveys were conducted by students from Warren-Wilson College, a four-year liberal arts college which teaches students through an integrated triad of academic study, useful and productive work, and service to others beyond the campus community. The students were enrolled in an Environmental Attitudes course and volunteered to collect data for ASAP as a service-learning project. For the survey, a total of 75 interviews were completed by the students on three separate days in September. September is typically a busy time at the market, though there are often more sales in the wholesale area of the market during September related to regional apple harvesting.

The WNC Farmers' Market

The WNC Farmers' Market offers growers several ways to market their crops. Through a designated "Farmer Only" shed, producers can market direct to consumers and small business operators. Otherwise, producers can sell their products to any of the retailers, wholesalers or small dealers who operate at the market.

In total, the market consists of fourteen separate buildings. The retail section of the market includes a garden center and two buildings where shoppers can buy fresh produce, baked goods, some meats and cheeses, and other handcrafted items as well as a wide variety of trees, plants and garden supplies. Approximately 25% of market sales occur in these three buildings.

The remaining 75% of market sales occur in the larger volume sheds located in a separate section of the market from the retail buildings. There are five truck sheds with spaces that are rented to

farmers and dealers on a year-round basis. One shed is reserved for farmers who sell only what they grow (the “Farmer Only” shed) while the other truck sheds include both farmers and dealers. The emphasis on wholesaling is one feature that differentiates the WNC Farmers’ Market from other state-owned markets.

Also on the site of the WNC Farmers’ Market are three buildings used by small dealers and wholesale companies. These companies sell produce to grocery stores, restaurants, institutions and roadside markets in WNC and other regions. They typically buy produce for resale from the large volume truck sheds at the market. The remaining two buildings at the market house a free-standing restaurant and administrative offices.

Table 1 provides some information about selected fruits and vegetables sold at the market in 2005. Other major types of fruits and vegetables sold that year include cabbage, corn, cucumbers, peppers, squash and strawberries, though complete sales data for those crops are not available.

	Volume sold ¹	Approximate equivalent in pounds
Apples	19,271 bushels	925,008
Beans	7,083 bushels	212,490
Cantaloupes	82,909 units	497,454
Onions	8,906 50-lb bags	445,300
Peaches	20,108 ½ bushels	482,592
Irish potatoes	8,920 50-lb bags	446,000
Sweet potatoes	4,720 40-lb boxes	188,800
Tomatoes	54,411 25-lb boxes	1,360,275
Watermelons	34,881 units	348,810

Source: WNC Farmers’ Market.

¹These volumes represent only the amount of produce that was checked in at the gate. It does not include wholesale and truck shed vendors who bring in their own products or individuals with annual delivery permits.

Because the market is largely a collection of independent retailers and wholesalers, sales volume in dollars for any of these crops is not available. It is also not possible to distinguish what portion of the food sold at the market was grown by WNC producers and what portion was grown in other places and sold at the market by local retailers, dealers and wholesalers.

Shoppers at the WNC Farmers’ Market

About 25% of shoppers completing a survey at the market were residents of Asheville and another 36% were residents of other communities in WNC. Overall, then, close to 40% of shoppers at the market on the days of the surveys were visitors to the region, some from other parts of North Carolina and some from other states. Where appropriate, results are reported separately for shoppers who reside in WNC (“regional shoppers”) and those from other places (“visitors”).

Most survey respondents were infrequent shoppers at the market. Many of the visitors indicated that this was their first time at the market or that they shopped at the market only a couple of times a year or less. Even among regional shoppers, however, more than 40% reported that they shop at the market only a couple of time a year or less. Still, more than half of all regional shoppers reported visiting the market with some regularity – generally somewhere between every week and once a month.

Spending at the WNC Farmers' Market

Shopper reports of estimated spending at the WNC Farmers' Market suggest that visiting the market is as much about the experience as it is about buying food. The average amount shoppers predicted that they would spend at the market was \$14, with the most common category of spending between \$0 - \$5. Some shoppers indicated that they simply enjoyed browsing at the market.

Overall, shoppers acknowledged that their farmers' market purchases represent only a small portion of their total food spending. Shoppers reported that they spend about 87% of their food budget at other food stores and between 10% and 15% of their food budget at either this market or other farmers' markets. Interestingly, there was very little difference in these proportions between shoppers who visited the market infrequently and those who said they shopped at the market regularly. This finding calls into question the validity of the self-reported spending numbers but it supports the well-established conclusion that the majority of all food spending takes place in food stores and not farmers' markets.

Motivations for Shopping at the WNC Farmers' Market

Shoppers were asked to rank six different reasons why they shop at the market in order of importance. The reasons are listed below in the order that they were ranked.

Figure 1: Reasons for Shopping at the WNC Farmers' Market Ranked by Market Shoppers

1. Freshness
 2. Supporting farmers
 3. Low prices
 4. Benefits to the region (local farmers, local economy)
 5. Market atmosphere
 6. Environmental benefits
-

This research confirms what other national and local research has found – that freshness is one of the most important qualities when consumers choose where and what type of produce to buy. There were no significant differences in how the reasons were ranked by regional shoppers compared to visitors.

Shopping at Other Farmers' Markets

Only 37% of WNC residents who shopped at the WNC Farmers' Market on the day of the interviews reported that they also shop at other farmers' markets. Other markets the shoppers patronize include farmers' tailgate markets, roadside stands and other small produce markets. Word of mouth was by far the most common way people reported finding out about the WNC Farmers' Market.

	Percentage of Respondents (N=75)
Word of mouth	63%
DOT road signs	15%
Passing by	9%
Radio, TV, magazine, newspaper	4%
Tourism agency/guidebook	3%
Other/No answer	6%
Total	100%

Awareness about ASAP's *Local Food Guide*

Shoppers were asked three questions designed to measure awareness about ASAP's *Local Food Guide*. Overall, 28% of survey respondents were familiar with the guide. That number was slightly higher among residents of WNC, with 37% of those respondents reporting familiarity with the guide. Less than a third of those, however, had used the *Local Food Guide*. The online version of the *Local Food Guide* was used less frequently than the print version, with fewer than 10% of those familiar with the guide reporting using that version.

Opportunities

Recognizing the common ground between ASAP's Local Food Campaign and the WNC Farmers' Market paves the way for future collaboration around efforts to increase consumption of food and farm products produced by the region's farms. At its core, this common ground concerns shopper motivations. The same things that motivate WNC Farmers' Market shoppers – freshness of food and shoppers' perceived ability to support farmers with their food dollars – are in large measure the driving forces behind ASAP's campaign.

With the development of a new, large and centrally located farmers' market set to open in downtown Asheville in the Spring of 2008¹, a focus on collaboration rather than competition will be especially important. A united effort to promote farm-fresh food can yield benefits to both the WNC Farmers' Market and the local producers whose interests ASAP represents in its campaign. Appropriate labeling of food produced in the region will assure that any premiums

¹ More information at <http://www.asapconnections.org/special/citymarket/index.htm>.

associated with the food being locally-grown will accrue to the region's farmers.²

Historically, ASAP's work to expand local markets for local farm products has focused on supporting the development and promotion of small farmers' tailgate markets in communities throughout the region. More recently ASAP has expanded to include larger scale markets, places where consumers typically get food – restaurants and retail food stores, for example – and where expanding local sales can have a bigger impact on the region's farm sector in terms of quantity of food sold. Sometimes that means advancing the work of distributors and wholesalers who can integrate local food and farm products into their businesses when it is available seasonally.

Beyond being a sizable retail store for farm-fresh food, the WNC Farmers' Market is a collection of many small dealers, wholesalers and distributors accustomed to marketing fresh produce. With its fourteen different buildings and opportunities for large and small scale, direct sale and wholesale, and year-round marketing of farm products, the WNC Farmers' Market represents a substantial piece of infrastructure for farmers in the region who wish to sell their products locally. Future collaboration among ASAP and the WNC Farmers Market can help identify ways to use this network to bring even more locally-grown food and farm products to the region's consumers.

² This research did not measure a premium associated with locally grown food, but other research in WNC and nationally suggests that consumers are willing to pay more for local food. (See e.g., *Locally Grown Foods Strategic Positioning Research*. 2004. Research Inc.: Atlanta, GA. or Pirog, R. *Ecolabel Value Assessment: Consumer and Food Business Perceptions of Local Foods*. 2003. Leopold Center for Sustainable Agriculture: Ames, IA .

*Opportunities for
Expanding Food and Farm Tourism
in Western North Carolina*

A report prepared by:



with support from:



November 2006

Introduction

Tourism is one of the largest industries in North Carolina. The Travel Industry Association reported total tourism expenditures of \$13.3 billion in the state in 2004, up from \$12.6 billion in 2003.¹ Other models are sometimes used for calculating the economic impact of tourism, including one (the *Tourism Satellite Account* or “TSA” model) which distinguishes direct from indirect tourism expenditures, such as restaurant food sales to tourists (direct) and agriculture sales from farms to restaurants (indirect).² Using the TSA model, total tourism expenditures in NC were estimated at \$18 billion in 2003, with approximately \$2.9 billion of those occurring in the Western region of the state.³

Agriculture is also one of North Carolina’s biggest industries. Cash receipts from agriculture topped \$7 billion in 2002, approximately \$543 million of those earned in the Western region.⁴ Multiplier effects are often used to describe the influence of agricultural sales on supporting sectors such that dollars spent on local agricultural products are recognized to generate additional economic impact to other regional businesses. Agricultural multipliers vary from region to region according to industry structure and other considerations, with figures ranging from 2.0 to 3.0 commonly reported. While calculating an agricultural multiplier for WNC is beyond the scope of this report, it is easy to see that agriculture – like tourism – generates billions of dollars in economic impact to the region.

Talking about agriculture and tourism together is not a new idea. “Agritourism” is the commonly accepted term used to describe efforts to merge the two industries in ways that open up new markets for farmers while providing additional travel experiences for tourists. Simply speaking, agritourism involves visits to working farms for recreation and entertainment purposes. Agritourism activities can be temporary attractions or all-encompassing enterprises. Among the many examples are pumpkin patches, fee fishing and pick-your-own operations.

Agritourism has a long history in North Carolina. Some of the oldest-operating agritourism farms in the state date to the 1940s. A 2005 Agritourism Survey by the NC Department of Agriculture and Consumer Services (NCDA&CS) identified 381 agritourism operations in the state, with nearly one-third of those in the western part of the state.⁵ More than half of statewide agritourism operations started up in the past ten years, suggesting that agritourism is increasingly being considered by NC farmers as a way to supplement farm income and make up for losses associated with rising input costs and falling commodity prices.

A strong and growing local food system creates the background for expanding agritourism in innovative ways. “Food system” is a term used to describe the entire spectrum of food production, distribution, processing and consumption of food. A local food system includes

¹ *Fast Facts: 2004 Economic Impact of Tourism*. 2005. Travel Scope, Travel Industry Association.

² *How Important is Tourism in North Carolina?* 2005. Global Insight, Inc. for the NC Economic Development Board.

³ The Western region is one of seven economic development regions in NC.

⁴ *2002 Census of Agriculture, Geographic Series*. 2004. National Agricultural Statistics Service, USDA.

⁵ *North Carolina Agritourism Survey Results*. 2005. Agritourism Office, North Carolina Department of Agriculture and Consumer Services.

those same processes within a limited geographic area such as a county or collection of counties. Since 2000, the Appalachian Sustainable Agriculture Project (ASAP) has worked to strengthen the local food system as a way to help sustain the region's farm economy.

The strong local food system in the region is linked to a larger, national movement promoting greater local consumption of locally-grown food and farm products in regions all over the country. One advantage of being part of this national movement is the opportunity to learn from what other regions have done to promote their own agricultural sectors. Agritourism is one area where this is particularly relevant. Other regions have successfully used agritourism not only to promote individual farms, but to promote the entire region. In other words, farms and the food they produce represent part of tourists' motivation for visiting the area.

This way of thinking involves expanding the definition of agritourism to include visitors to the region who are interested in making a connection with the region's agricultural sector *that may or may not involve a visit to a farm*. The connection might involve eating at a restaurant or staying at a Bed & Breakfast that features locally-grown food, attending a festival or event celebrating regional cuisine, or traveling a scenic trail through the region's farmland. This is important because, while not all farms can welcome tourists to their farm for events and activities, all farms can benefit from greater demand for locally produced food and farm products.

The research presented here involves two components. The first is a survey of WNC tourism professionals. The goals of the survey were to determine to what extent visitor organizations are currently using the broader concept of agritourism to motivate visitors to vacation in the region, and what potential there is for promoting an expanded concept of agritourism. The second component is a review of some other regions' agritourism activities, with a focus on examples where innovative linkages between tourism agriculture have been developed.

Section I: A Survey of Western North Carolina Tourism Professionals

An online survey for tourism professionals was developed and a link sent to 30 agencies representing the 23 counties of Western North Carolina (WNC). The list of agencies included Chambers of Commerce, Convention and Visitor Bureaus, Tourism Development Authorities and similar organizations, each designated as the lead tourism agency within its county. Several "regional hosts" were also on the list, which are organizations representing distinctive regions within the region – the High Country or the Smoky Mountains, for example. A total of 11 agencies completed the survey for a response rate of 37%.

Results indicate a high volume of visitor contacts. On average, the number of visitor contacts per agency per month was 2,881. June and July were the two highest volume months, with an average number of visitor contacts around 5,000 per agency each month. The actual number of calls varied widely by organization, with some small Chambers of Commerce receiving less than a few hundred calls per month and other agencies receiving in excess of 10,000 calls per month at times.

According to survey respondents, less than 30% of visitor contacts over the past twelve months included discussions of agritourism of any kind. When agritourism was discussed, tourism professionals were most often responding to specific requests from potential visitors. Examples include inquiries about where to find an apple farm or choose-and-cut Christmas tree farm, information about vineyard tours, or the location of a farmers' market.

When there was some mention of agritourism, respondents suggested that it was split about evenly between conversations involving traditional types of agritourism and conversations involving an expanded definition of agritourism. The expanded definition as described previously involves aspects of food and farm tourism that are not limited to an activity or event benefiting a single farm.

When asked whether they thought an expanded definition of agritourism would be a valuable concept in marketing the region to potential visitors, more than 70% of tourism professionals surveyed indicated that it would. In thinking about how they might use the concept, more than half of respondents indicated that they would suggest those types of activities to visitors requesting general information about the region, and a third said they would suggest those types of activities only to visitors inquiring about food and farm tourism opportunities.

Training was the most commonly chosen category of assistance that respondents indicated would be helpful in marketing the concept, followed by maps and print materials, then web-based information. The request for training suggests that tourism professionals need more basic information about how they can promote the region's agricultural sector. This should include information about using ASAP's *Local Food Guide*, which was used by less than half of tourism professionals in the 12 months prior to the survey. Examples of what other regions have done to promote food and farm tourism may also be helpful in this regard (see Section II).

While survey respondents were positive about the idea of promoting the region's food and farm economy in a broader way, the small number of responses to the survey may indicate a lack of interest in the idea. Given the obvious advantages of working through an established network of tourism agencies to promote this concept, barriers to participation should be explored more fully. Partnerships between agriculture and other tourism-related industries (the arts, recreation or hospitality, for example) may also be worth pursuing in order to advance the connectedness between tourism and agriculture in the region.

Section II: New Directions in Agritourism: Examples from Other Regions

Two examples of innovative approaches to combining agriculture and tourism are presented here, along with details about how they are being implemented in selected locations.

Place-Based Agricultural Marketing

The marketing of agricultural products based on the place where they were produced is an approach that lends itself well to combination with tourism. In other words, to put value on an agricultural product because of where it was produced is to put value on that place itself. This idea is relatively new in the United States, although well-established in some European

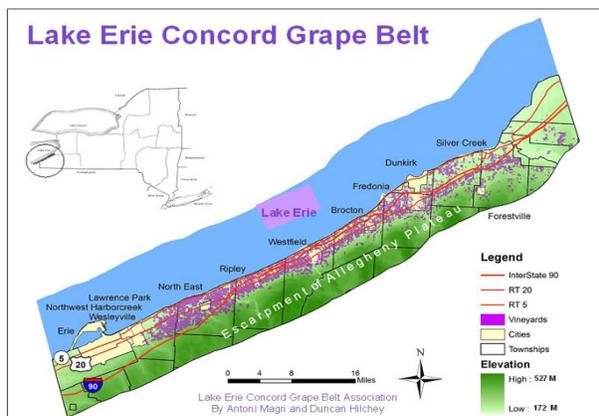
countries. Several initiatives around the country, often led by stakeholder groups of both agricultural producers and tourism professionals, connect a region's agricultural products with tourism to differing degrees. All rely on a distinguishing label to mark agricultural products from a specified region and also on outreach or promotional campaigns developing the connection between those products and their origins. They vary in the extent to which they also promote the region of origin as a tourist destination. Three examples are presented below.

- The Iowa Place-Based Food Project⁶

This project builds on a previous Iowa project called *A Geography of Taste*, which makes connections between Iowa locations and foods traditionally produced or consumed in them. Maps were developed showing areas across the state where, because of either ecological conditions or cultural surroundings, certain foods have been traditionally produced and consumed (see inset). The *Iowa Place-Based Food* project builds on the *Geography of Taste* project by identifying foods that are perceived by Iowa residents and growers to be most unique to the state. In Phase 1 of the project, food producers and consumers identified foods that are connected to Iowa's land and cultures using unique criteria in three areas: the food must have an ecological and geographical niche; it must have a heritage basis; and there must be a narrative that explains those connections to Iowa. The challenge of this project, and the researchers' hope, is to draw attention to the places where these items are produced and so anchor them in a location, rather than just in quality or mode of production. Phase 2 of the project will focus on marketing foods identified in Phase 1, and on developing culinary tourism around the foods.



- The Concord Grape Belt of New York State⁷



A group in New York has produced a study on the feasibility of designating the Lake Erie shore of New York as an Agricultural Heritage Area (AHA). This AHA would be in the same vein as national heritage areas that are recognized for the culturally important events that occurred there, and would presumably draw visitors for the same reasons that a cultural heritage area would. Because the Concord grape was discovered in this area and continues to be grown there in

⁶ For more information: http://www.iowaartscouncil.org/publications_&_resources/iowa-arts-news/2005/july/taste-of-place.htm

⁷ For more information: <http://www.concordgrapebelt.org/>

large concentration, organizers believe that the region has enough “heritage muscle” to draw visitors and to create a niche market for grapes of controlled origin. An advocacy group made up of around 150 growers, tourism professionals, grape producers, processors and other interested stakeholders, has introduced legislation in the state to establish the Concord Grape Belt as a New York State heritage area and has initiated a Grape Belt Industry economic impact study. Informational kiosks along the shoreline, identifying signs at participating businesses and vineyards, and a “traveling grape” educational display that moves around the region are some of the components being used to promote the Grape Belt to visitors. Other actions being considered include tax benefits and incentives for growers, vineyard land preservation activities, a “label of controlled origin” marketing campaign, and an interpretive trail and scenic byway.

- The Missouri Regional Cuisines Project⁸

This project, coordinated by Missouri Cooperative Extension and launched in 2003, seeks to promote the agricultural products of a select “pilot region” by developing local labels of origin. The pilot region, the Mississippi River Hills, borders the Mississippi River and encompasses six Missouri counties. The region primarily produces grapes and wine, but the proposed labels of origin would be applicable to all agricultural products. The larger project would define the origin of agricultural products by ecological regions of the state. The pilot project is run by five stakeholder groups, including wine industry representatives, tourism professionals, agricultural producers, local governments and economic developers. The project has produced a regional tourism map and produces a newsletter filled mostly with marketing information for growers in the region. As quality standards for the labels are developed, all affected industry sections are encouraged to develop relevant guidelines.

Culinary Tourism

Culinary tourism is another major way that localities are connecting agricultural and tourist economies. Culinary tourism refers to visits people make for recreation or leisure that focus on food or eating.

- Food-related tours

New York City and San Francisco both serve as examples of places where strong “tourist awareness” of the cities is already in place. In these cases, entrepreneurs have only to tie regional food and farm products in with the already strong tourist attraction the cities have. A good illustration of this is the culinary tours being offered by private companies in both of these cities in which visitors (or even locals) are ferried to different food destinations around the city.⁹

Tours focus on providing “authentic” experiences of these popular cities with lesser-known destinations and activities that promise to make visitors “feel like a real Franciscan” or to give them an “off-the-beaten-path glimpse of life in New York City.” Tours focus on restaurants and markets, but also incorporate artists’ studios, historic markers, and other distinctive cultural

⁸ For more information: <http://extension.missouri.edu/cuisines/index.html>

⁹ “Local Tastes of the City Tours” in San Francisco: <http://www.localtastesofthecitytours.com/>
“Foods of New York” tours in NYC: <http://www.foodsofny.com/>

centers of the city that may be inaccessible or lesser known to tourists on their own. The tours, which are personally led by residents of the city, echo other food tours of larger areas like the California wine country, as well as other “underground” tours of well-known cities.

Section III: Implications

Many individual components of the “Examples from Other Regions” are in fact present in WNC. ASAP’s newly developed *Appalachian Grown*TM logo, for example, differentiates food and farm products produced in the region from those produced in other regions.¹⁰ The organization’s *Local Food Guide* also provides information about the availability of locally-grown food in restaurants and other businesses in the area. Other organizations like Handmade in America, the Blue Ridge National Heritage Area and the North Carolina Arts Council promote scenic trails through the region’s farmland.

What seems to be missing in the region is the type of broad-based collaboration present in some other regions highlighted in section II of this report. A group made up of representatives from agricultural support agencies and non-profit organizations, the restaurant and hospitality industries and producers themselves may be able to raise the level of agritourism in the region to one that provides greater impact to both the tourism and agriculture industries. The extent to which such collaboration is backed up by resources – financial and other – will significantly impact its success.

¹⁰ For more information: <http://www.asapconnections.org/AG/AppalachianGrown.html>

Exploring the Role of Latinos
in the
Western North Carolina Food System

Prepared for
the Appalachian Sustainable Agriculture Project



by

Laura D. Kirby
James Blair

March 2007

One of the most significant demographic trends in Western North Carolina (WNC) in the past decade has been rapid strong growth in the number of residents of Hispanic or Latino origin. The total population in the region grew by 17% from 1990 to 2000 but the fastest growing ethnic group was Latinos. The number of persons of Hispanic/Spanish/Latino origin increased from 5,342 to 29,106 over the decade.¹ Still, they represent only a small portion of the region's total population at just under 3%.

Several groups have examined the influence of Latinos on the region's economy and industry. In 2003 the North Carolina Department of Agriculture initiated a study on the market potential for Hispanic cheeses in the region. In 2005 researchers from the University of Georgia examined the buying power of Hispanics in North Carolina and throughout the nation. And in 2006 a team of researchers from the University of North Carolina released a report describing the economic impact of the state's growing Hispanic population that identified potential business opportunities provided by this fast-growing market.

The Appalachian Sustainable Agriculture Project (ASAP) has identified at least four ways that the Latino community intersects with the food system in WNC.² "Food system" refers to the entire spectrum from food production, processing and distribution to consumption. ASAP is a nonprofit organization dedicated to strengthening the local food system as a way to help sustain farms and farming in the region. The four areas of overlap involve:

- **Farmworkers.** Latinos represent the largest source of farm labor in the region right now.
- **Farmers.** Farm owners and operators of Hispanic origin are a significant and growing part of agriculture in the U.S.
- **Markets.** Latino-owned food stores and restaurants represent potential markets for locally-grown food and farm products.
- **Consumers.** The nearly 30,000 residents of Hispanic/Spanish/Latino origin are potential consumers of local farm products.

In the fall of 2006 ASAP initiated a survey of organizations working with Latinos in Western North Carolina. The Coalicion de Organizaciones Latino-Americanas (COLA) is a regional coalition of grassroots and non-profit Latino-led organizations and agencies working with the Latino community. Collecting information from COLA member organizations rather than directly from Latino farmers, farm workers and business owners was a way to overcome practical constraints associated with data collection – time and resource constraints as well as language barriers. This approach means that information must be interpreted with caution. A further limitation of the survey is that it did not measure consumer perceptions about local food or demand for local farm products in any way.

For the survey, representatives from seven COLA member organizations were interviewed over the phone and asked questions about Latino-owned tiendas and restaurants in their communities, issues affecting farm workers in the region, and perceived interest among Latinos in managing or

¹ *2000 Population Census*. US Bureau of the Census.

² For this research, Western North Carolina is defined as the 23 counties included in the Advantage West region, one of seven economic development regions in North Carolina.

owning their own farms. Results are summarized according to topic and are supplemented with state and national statistics.

Farm Operators

Although more than 90% of farm operators in the United States are white, the number of Spanish/Hispanic/Latino farmers is increasing. The number of these farmers reported on the USDA Census of Agriculture increased from 20,956 in 1992 to 61,094 in 2002. Table 1 shows how the number of Spanish/Hispanic/Latino farmers has changed nationally and in North Carolina from 1992 to 2002.

	1992	1997	2002	% Change (1992-2002)
North Carolina	131	320	739	+464%
WNC	n/a	48	199	+314%
United States	20,956	27,717	61,094	+192%

Source: USDA Census of Agriculture

These are not farm workers, but farm operators who own or lease land to produce food and other farm products. Part of the explanation for this trend is that sometimes farm workers enter into agreements with farm operators to purchase a farm when the children of the farm operator are not interested in maintaining the farm business.³ Latino farmers thus represent an important group of replacement farmers as older farmers retire.

According to the USDA, the average age of farmers has also been on an upward trend. The age of farmers has gone up every year since 1978 and the national average in 2002 was 55.3 years of age. The average operator age in 2002 was higher than the national average in all but three of the 23 counties of WNC. Nearly a third of North Carolina Cooperative Extension (NCCE) agents working on agriculture issues in the region named the aging of the farm population as one of the top issues affecting the region's farm sector.⁴ When asked to rank how prevalent different categories of replacement farmers are in their communities, the NCCE agents ranked Latino farmers last of five categories. The other categories were, in order, lifestyle farmers, organic farmers, retirees and then next-generation farmers.

In this survey of Latino organizations, respondents were asked to rate interest among Latinos in their communities in becoming farm owners or managers. Only two respondents rated interest as high, three rated interest as low, and two were not able to answer. Language and cultural barriers and documentation status were the most frequently reported barriers to Latinos owning or managing their own farms, followed by access to capital, cost of land, lack of knowledge or information and lack of transportation.

³ *Number of Latino Farmers on the Rise Across the U.S.* July-August 2004 *Attra News*. National Sustainable Agriculture Information Service, USDA.

⁴ *A Survey of NC Cooperative Extension Agents in Western North Carolina*. 2007. Appalachian Sustainable Agriculture Project: Asheville, NC.

Farm Labor

A recent estimate is that more than 8,000 migrant and seasonal farmworkers work on WNC farms during the harvest season, pruning and cutting Christmas trees and hand picking apples, strawberries, cucumbers and other fruits and vegetables.⁵ These include seasonal workers who live in the region but typically work non-agricultural jobs at other times of the year, and migrant workers who move from place to place based on harvest requirements. Most migrant and seasonal farm workers in WNC come from Mexico. According to the Institute for Southern Studies, approximately 10% of migrant and seasonal farmworkers in North Carolina participate in the H2A Agricultural Worker Program, a federal program that provides for non-residents to legally work in the U.S. for four to six months each year.

North Carolina is the nation's largest participant in the H2A program, accepting 6,500 legal migrant farmworkers in 2005.⁶ Under the program laws, farmers who employ migrant workers must provide a minimum standard of hourly pay that is federally determined each year, housing that meets prescribed standards for temporary labor camps, compensation for work-related injury and illness, payment for at least three-quarters of the employment period offered under contract, and reimbursements for transportation costs to and from the U.S. Grower applications to participate in the program must be filed 45 days in advance of the anticipated worker start date. The program requires that farmers actively recruit domestic workers before employing immigrants.

What is the H2A Agricultural Worker Program?

The H2A Agricultural Worker Program is a federal program that provides for non-residents to legally work in the United States for four to six months each year. The program is designed to help meet the need for seasonal, or temporary, farm labor. North Carolina is the nation's largest participant in the H2A program, with as many as 8,000 to 10,000 workers hired each year through the NC Growers Association. While individual growers can arrange to hire H2A workers on their own, most choose to work with the association – for a flat fee of around \$900 per worker – because of its familiarity with program policies and practices.⁷

Most H2A workers in North Carolina come from Mexico, where a migrant worker can earn enough pay in one season to support his family for the entire year. Many workers that participate in the H2A program belong to the Farm Labor Organizing Committee (FLOC), a labor union that has represented migrant farm workers in North Carolina since signing a contract with the NC Growers Association in 2005.

Under the program laws, farmers who employ migrant workers must provide a minimum standard of hourly pay that is federally determined each year, housing that meets prescribed standards for temporary labor camps, compensation for work-related injury and illness, payment for at least three-quarters of the employment period offered under contract, and reimbursements for transportation costs to and from the United States. Grower applications to participate in the program must be filed 45 days in advance of the anticipated worker start date. The program requires that farmers actively recruit domestic workers before employing immigrants.

⁵ Larson, A. *Migrant and Seasonal Farmworker Enumeration Profiles Study: North Carolina*. 2000. Migrant Health Program, Bureau of Primary Health Care: Health Resources and Services Administration.

⁶ *NC Farming has a Labor Crisis*. October 20, 2005. Greensboro News Record.

⁷ Personal communication, Tony Macias at Student Action with Farmworkers.

According to representatives from the seven Latino organizations surveyed, family and personal issues are as important as working conditions in terms of challenges facing farm workers in the region. Family and personal issues include housing, medical care, education, language, and documentation status. Among work-related challenges, more than half of all comments by survey respondents focused on safety, mostly concerning pesticide exposure and related safety equipment and information. Other issues not named by survey respondents but understood to be challenges facing Latino farm workers in this region include racism, low wages, limited options for jobs when the growing season ends, a lack of legal protections and other problems related to the fact that farm workers are excluded from minimum wage laws and some Occupational Safety and Health Administration (OSHA) regulations that cover other types of workers.⁸

Latino-Owned Businesses as Potential Markets for Locally-grown Food

Survey respondents estimated that as many as 45 Latino-owned restaurants and 75 tiendas are operating in the seven counties where they work. Many items that could be produced by the region's farms – apples, cabbages, cucumbers, peppers, tomatoes, squash, cheese, fresh meats and others – are among the items survey respondents named as typically offered in these establishments. In the remaining counties of WNC there are likely dozens more of these establishments, though traditional methods for finding business listings are not useful in generating a list. The online directories Whitepages.com and Yellowpages.com, for example, revealed only 28 tiendas in the entire region.

Overall, survey respondents described Latino business owners as interested in buying local farm products, but price was named as a significant barrier. Other barriers included availability and quality as well as relationship issues, of which language was one. It is important to note that these barriers were perceptions of Latino organization representatives and not barriers actually reported by potential buyers of local farm products.

Conclusion

This research was mostly exploratory, with the goal of identifying and understanding issues important to how the Latino community intersects with the food and farm economy in Western North Carolina. It is part of a larger research project whose goals are to assess the region's food and farm economy with a focus on expanding local markets for local farm products.⁹

Other than the large number of Latino-owned businesses, there was no evidence that those establishments represent a strong potential market for local farm products. More research is needed, though the fact that ASAP's Local Food Campaign has not targeted Latino consumers in the region means that demand for local food may not be strong in those markets. It may be appropriate to expand the campaign with information in Spanish to reach Latino consumers.

Aside from markets, issues of farm labor and farm ownership are central to building a strong local food system in the region. Whether Latinos will be a significant group of replacement

⁸ Personal interview, Molly Hemstreet with the Center for Participatory Change.

⁹ See "Local Food System Research", www.asapconnections.org.

farmers in this region is not clear from this research. The research does identify at least some barriers that would need to be addressed in order for that to happen.

The most important outcome of this research is to identify some issues of significance for farm workers in the region. Labor represents one of the largest inputs for producers in WNC, particularly fruit and vegetable growers, and attention to those issues will be important to maintaining a strong and successful local food system in the region.

*The Infrastructure of Food Procurement
and
Distribution:
Implications for
Western North Carolina Farmers*

Prepared for
the Appalachian Sustainable Agriculture Project



by

Allison Perrett

March 2007

This report examines the food industry in the United States and its implications for farmers in Western North Carolina who want to grow for and sell to local markets. The first part of the report examines the broad structure of food procurement and distribution. Subsequent sections examine procurement and distribution systems of particular commodity segments (produce, beef, and dairy) and the local infrastructure for direct marketing and food processing. In the context of Western North Carolina, this report focuses on the existing infrastructure of food procurement and distribution. Local patterns of distribution are presented as models and are based on current but not complete knowledge of existing systems with the potential to accommodate more local food with further development. Data on local systems are drawn from participant observation; from formal and informal interviews with local producers, processors, and wholesalers; and from local news outlets.

The Food Industry

To eat is to participate in a global food system. Over 800 million tons of food are shipped around the world annually¹. Food today travels an average of 1500 miles from harvest to table, a distance that is representative of the industrialization and globalization of the food supply and the dearth of knowledge consumers have about how and who is producing, processing, and transporting the food that they eat². From grower to consumer, food often changes hands a dozen times or more³, moving along a food supply chain that links producers, packers, shippers, food manufacturers, wholesale distributors, food retailers, and consumers. With this modern industrialized agricultural system, the farmer is no longer at the center of the production process; farming is just one component of a complex agribusiness system comprised of agricultural inputs, farm production, processing, distribution, and consumption.

Agricultural industrialization, which emerged in the United States at the beginning of the twentieth century, transformed food production⁴. Characterized by mechanization, use of chemicals, and food manufacturing, it is a model of food production that focuses on the production of large quantities of uniform products at the cheapest price possible. Producers purchase more non-farm inputs (machinery, fertilizers, agrichemicals, etc) to increase output. Increased output lowers commodity prices and forces “inefficient” producers out of business.

Over the past four decades, concentration in the ownership and management of food production has dramatically restructured the agricultural and food industry in the United States and globally. Through horizontal and vertical integration⁵, fewer but larger companies have come to dominate each stage of production, processing, and distribution^{6 7}. Through mergers and acquisitions and

¹ Halweil, B. 2002. *Home Grown: The Case for Local Food in a Global Market*. *Worldwatch Paper 163* Worldwatch Institute, pg. 17.

² Jack Kloppenburg, J., J. Hendrickson, and G. W. Stevenson. 1996. Coming into the Foodshed. *Agriculture and Human Values* 13:33-42.

³ Ibid.

⁴ Stull, D. D., and M. J. Broadway. 2004. *Slaughterhouse Blues: The Meat and Poultry Industry in North America*. Belmont, CA: Thomson Wadsworth.

⁵ With horizontal integration, companies expand ownership or control across one stage of food production to produce or control a larger share of a particular commodity; with vertical integration a single corporation expands ownership or control into a number of stages of product production, from the basic raw materials for agricultural production to processing.

⁶ Grey, M. A. 2000. The Industrial Food Stream and Its Alternatives in the United States: An Introduction. *Human Organization* 59:143-150.

fortified by farm policy, companies achieve economies of scale to produce or control a larger share of particular commodities. With economies of scale, companies are able to achieve cost advantages and undercut competitors by forcing the price of commodities below the cost of production. Cost advantages are achieved through larger-scale production; an increase in the number of units produced results in a decrease in the cost of producing each unit⁸.

In the United States, the transformation of agriculture through consolidation has been dramatic, so much so that the government has considered eliminating “farming” as a census category⁹. At one time the United States was a nation of farmers. In 1920 there were 6.5 million farms, and farm residents accounted for nearly 30 percent of the country’s population¹⁰. In 1991, the Bureau of the Census estimated the farm population at 1.9 percent of the total population and at that point stopped publishing estimates of farm resident population. This decision reflects both the decreased statistical significance of the farm population and the decreased economic and social significance of farm residence. In the industrial agricultural model, the farm owner, the farm manager, and the farm worker are all different people.

In contrast to the decline in farm numbers and farm population, farm size, measured in average acres per farm, has increased three-fold from 146 acres in 1900 to over 440 acres in 2002¹¹. Large commercial farms—defined as those with annual sales above \$250,000—produce about 70 percent of total farms sales but only represent 7 percent of all US farms. The share of production for smaller family farms—defined as those with annual sales less than \$250,000—dropped from 40 percent in 1989 to about 26 percent in 2003¹².

The trend toward larger farms is tied directly to profit margins and to the U.S. system of farm subsidies, which rewards gross output and encourages a “get big” strategy. On average smaller farms have negative farm operating profits and frequently combine on-farm income with income from off-farm sources^{13 14}. As farm size increases, profit margins also increase. Larger farms average an operating profit margin of greater than 10 percent¹⁵, but this profitability is tied to a large extent to farm commodity programs. By their nature, commodity programs encourage farmers to expand operations in order to obtain more acres and higher guaranteed government payments. In addition to leading to the concentration of production in the hands of fewer and fewer farms, this subsidy system—applied primarily to five crops (corn, wheat, soybeans, cotton, and rice)—benefits the operations of food manufacturers and other food marketers who have access to a steady supply of cheap farm commodities, which reduces costs and boosts profits.

⁷ Heffernan, W. D. 2000. "Concentration of Ownership and Control in Agriculture," in *Hungry for Profit: The Agribusiness Threat to Farmers, Food, and the Environment*. Edited by J. B. F. Fred Madgoff, Frederick H. Buttel, pp. 61-75. New York: Monthly Review Press.

⁸ Stull and Broadway 2004

⁹ McMichael, P. 2000. "Global Food Politics," in *Hungry for Profit: The Agribusiness Threat to Farmers, Food, and the Environment*. Edited by F. Madgoff, J. B. Foster, and F. H. Buttel, pp. 125-143. New York: Monthly Review Press, pg.135.

¹⁰ Gardner, B. L. 2002. *American Agriculture in the Twentieth Century: How It Flourished and What It Cost*. Cambridge, MA: Harvard University Press, pg. 50-51.

¹¹ USDA/Economic Research Service, <http://www.ers.usda.gov/AmberWaves/June05/Indicators/onthemap.htm>.

¹² MacDonald, J., R. Hoppe, and D. Banker. 2006. *Growing Farm Size and the Distribution of Farm Payments, Economic Brief Number 6*. USDA/Economic Research Service.

¹³ Jones, C. A., H. El-Osta, and R. Green. 2006. *Economic Well-Being of Farm Households, Economic Brief Number 7*.

USDA/Economic Research Service.

¹⁴ MacDonald, Hoppe, and Banker 2006

¹⁵ MacDonald, Hoppe, and Banker 2006

Artificially cheap corn, for example, underwrites the ‘supersizing’ of fast food for processors¹⁶ as well as the production of high fructose corn syrup and ethanol.

Consolidation and supply chain management strategies

Consolidation at one point in the food chain stimulates consolidation at other stages in the food chain^{17 18}. To maintain bargaining power with other stages of the food supply chain that are undergoing consolidation, producers and processors, wholesalers, and retailers increase the size of their operations to guarantee market outlets and to capture efficiency gains and lower procurement costs by doing business with fewer numbers of customers^{19 20}. As previously noted, in production, the largest farms produce about 70 percent of total farms sales but only represent 7 percent of all US farms. In food manufacturing, the top 20 companies’ market share increased from 36 percent of industry sales in 1987, to almost 44 percent in 1992, to 51 percent in 1997²¹. In the wholesaling sector, the top four broadline wholesalers—which distribute a full line of food and nonfood products—increased from 26 percent of the market share in 1987 to nearly 41 percent of the market in 1997²². In food retailing, the top ten grocery store chains accounted for nearly 70 percent of sales in 2005 compared with 53 percent in 1999²³.

To further streamline product procurement and distribution and facilitate greater bargaining power, food companies ground their business practices in the logistics of supply chain management. Supply chain management strategies forge one-on-one (vertical) relationships between dominant food companies, formally linking producers, processors, wholesalers, and retailers^{24 25}. Meat processing firms increasingly contract with producers, for example, to provide them with livestock. Large producers want the assurance that comes from dealing with a guaranteed market and processing firms want a guaranteed supply to keep their operations running efficiently. Retailers and suppliers are also becoming increasingly interdependent. In this relationship buyers and suppliers co-manage store inventory through electronic surveillance of consumer buying practices. Cutting edge information technologies like electronic data interchange (EDI)²⁶, efficient consumer response (ECR)²⁷, and continuous replenishment

¹⁶ McMichael, P. 2004. Global Development and the Corporate Food Regime. *Paper presented at the Sustaining a Future for Agriculture Conference, Geneva, November 16-19 2004.*

¹⁷ Halweil 2002.

¹⁸ Harris, J. M., P. Kaufman, S. Martinez, and C. Price. 2002. *The U.S. Food Marketing System, 2002. Competition, Coordination, and Technological Innovations into the 21st Century.* Economic Research Service/USDA. Electronic document, <http://www.ers.usda.gov/publications/aer811/>, pg. 2.

¹⁹ Eastwood, D., J. Brooker, C. Hall, E. Estes, T. Woods, J. Epperson, and F. Stegelin. 2004. *A Marketing Systems Approach to Removing Distribution Barriers Confronting Small-Volume Fruit and Vegetable Growers.* University of Georgia. Electronic document, http://web.utk.edu/~brookeoo/RESEARCH/SCSB_TN_s222.pdf, pg. 2.

²⁰ Harris, J. M., P. Kaufman, S. Martinez, and C. Price 2002, pg. 2.

²¹ Harris, J. M., P. Kaufman, S. Martinez, and C. Price 2002.

²² Harris, J. M., P. Kaufman, S. Martinez, and C. Price 2002, pg. 66.

²³ ProduceMarketingAssociation. 2006. *Food Industry Consolidations.* Produce Marketing Association. Electronic document, http://www.pma.com/Template.cfm?Section=Industry_Fact_Sheets&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=58&ContentID=4407.

²⁴ Hendrickson, M., W. D. Heffernan, P. H. Howard, and J. B. Heffernan. 2001. Report to the National Farmers Union. Consolidation in Food Retailing and Dairy: Implications for Farmers and Consumers in a Global Food System. Department of Rural Sociology, University of Missouri.

²⁵ Kaufman, P. 2000. *Consolidation in Food Retailing: Prospects for Consumers & Grocery Suppliers.* Economic Research Service/USDA. Electronic document, <http://www.ers.usda.gov/publications/agoutlook/aug2000/contents.htm#four>, pg. 19.

²⁶ EDI is the electronic exchange of information between two companies relative to things like pricing, promotion, invoices, shipping notices. This instant paperless transmission improves the flow of information and assists with scheduling and inventory.

programs (CRP)²⁸ streamline product procurement and distribution enabling suppliers and retailers to respond more quickly to the demands of the marketplace²⁹.

Value chains

Supply chain management activities link the value chains that transform raw materials and components into finished products for consumers. With increased consumer demand for convenience foods, food manufacturing—which adds economic value to agricultural products through processing and packaging—has significantly increased in importance. The goal for food companies is to simultaneously maximize value creation while minimizing costs through supply chain management practices like inventory reduction, increasing the speed of transaction by exchanging data in real-time, and increasing sales by implementing customer requirements more efficiently.

With the increasing role of food manufacturing, farmers are receiving dwindling proportions of what consumers pay for food products at the retail level. Overall, the farm value share of the food dollar—the economic return farmers receive for the farm products they sell—decreases as the degree of processing increases and, concomitantly, as the distance between producers and consumers increases. In 1980, out of the \$264 billion American consumers spent on food, overall farmers received \$82 billion or 31 percent of the total³⁰. In 2004, farmers' share dropped to about 20 percent of the \$789 billion spent on food³¹. The remaining 80 percent was absorbed by middlemen (processors, wholesalers, distributors, and retailers) and reflects value added as labor, transportation, packaging, advertising, and other marketing costs that accrue in transforming farm commodities into food products and meals^{32 33}.

Challenges to small and mid-size farmers

The current structure of the food system, dominated by smaller and smaller numbers of companies, poses serious challenges to small and mid-size farmers. Larger packers, wholesale distributors, and retailers do not see viable opportunities in working with smaller food producers who cannot meet the supply volumes, post-harvest handling requirements, or the technology to produce case-ready products for retail³⁴. Large companies want to buy from large suppliers and vertically integrated supply systems shut out smaller farmers as well as smaller scale food businesses.

²⁷ ECR is a system that has the capacity to track patterns of food sales with unprecedented detail; it allows retailers to respond quickly to consumer desires in the selection and stocking of the most profitable items.

²⁸ CRP describes the practice of partnering among distribution channel members. CRP has changed the traditional replenishment process from distributor-generated purchase orders (based on economic order quantities) to the replenishment of products based on actual and forecasted product demand.

²⁹ Kaufman 2000, pg. 19.

³⁰ EconomicResearchService. 2006. *Food Market Structures*. USDA. Electronic document, <http://www.ers.usda.gov/Briefing/FoodMarketStructures/>.

³¹ Ibid.

³² Davis, D. E., and H. Stewart. 2002. Changing Consumer Demands Create Opportunities for U.S. Food System. *FoodReview* Spring 2002:19-23.

³³ Elitzak, H. 2001. *Food Marketing Costs at a Glance*. USDA/Economic Research Service.

³⁴ Eastwood, D., J. Brooker, C. Hall, E. Estes, T. Woods, J. Epperson, and F. Stegelin. 2004. *A Marketing Systems Approach to Removing Distribution Barriers Confronting Small-Volume Fruit and Vegetable Growers*. University of Georgia. Electronic document, http://web.utk.edu/~brooke00/RESEARCH/SCSB_TN_s222.pdf.

The growing dominance of large grocery retailers in the food system in recent years has especially engendered a shift in the mechanics of food distribution³⁵. As retailers are growing through mergers and acquisitions, they are developing their own vertically integrated distribution systems with large food manufacturers and producers. The growing prominence of self-distributing retailers, which manage their own trucking fleets, warehouses, and buying offices, is impacting the viability of wholesale markets, where retailers traditionally purchased their supplies. As food manufacturers vie for bargaining power with large food retailers, small and mid-size processors are absorbed into an increasingly smaller number of firms³⁶. Retailer fees, i.e., advertising and failure fees and slotting allowances where suppliers pay for the privilege of stocking their products on shelves, marginalize smaller farmers and smaller scale food businesses unable to assume additional costs^{37 38}. One estimate speculates that 50 to 75 percent of the total net profit for large retailers like Kroger and Walmart comes from these kinds of retailer fees³⁹.

The growth and consolidation in the foodservice industry, which includes establishments that dispense fully prepared meals and snacks for on-premise or immediate consumption⁴⁰, also poses serious challenges to smaller farmers and small-scale food businesses. With consumers eating outside of the home or taking ready-to-eat foods back to their homes about 50 percent of the time, the food service industry has grown to a \$420 billion industry⁴¹. As with large food retailers, foodservice businesses are seeking efficiency gains and lower procurement costs by doing business with fewer numbers of suppliers. Broadline wholesalers, which carry a full range of food and nonfood products, account for 50 percent of foodservice distribution sales⁴². SYSCO Corporation, for example, is a broadline foodservice distributor that supplies products to restaurants, schools, healthcare facilities, colleges, and corporate worksites. It supplies nearly 400,000 restaurants in the United States alone ranging from franchise restaurants and fast food enterprises, to five star and ethnic restaurants, to local “mom and pop” establishments. A \$30.5 billion company, SYSCO offers its foodservice customers one-stop shopping and a comparative price advantage on a full line of inexpensive food and nonfood products from paper supplies and dishwashing detergent to bulk food items like flour and rice, fresh produce, meats, and thousands of heat and serve items⁴³.

This kind of industry concentration and integration that formally links buyers and sellers undermines the ability of small and mid-size farmers to access markets. Large companies have a difficult time sourcing local food because they deal in huge quantities, and their distribution systems are highly centralized.

³⁵ Hendrickson, Heffernan, Howard, and Heffernan 2001.

³⁶ Harris, J. M., P. Kaufman, S. Martinez, and C. Price. 2002. *The U.S. Food Marketing System, 2002. Competition, Coordination, and Technological Innovations into the 21st Century*. Economic Research Service/USDA. Electronic document, <http://www.ers.usda.gov/publications/aer811/>.

³⁷ Halweil 2002.

³⁸ Hendrickson, Heffernan, Howard, and Heffernan 2001.

³⁹ Hendrickson, Heffernan, Howard, and Heffernan 2001, pg. 12.

⁴⁰ Harris, Kaufman, Martinez, and Price 2002, pg. 36.

⁴¹ Ennis, J. 2006. *Final Report the Value Chain Partnerships for a Sustainable Agriculture Project and the Regional Food Systems Working Group*. Cooperative Development Services and Leopold Center.

⁴² Harris, Kaufman, Martinez, and Price 2002, pg.14.

⁴³ Boser, U. 2007. Every Bite You Take: How Sysco Came to Monopolize Most of What You Eat. Slate.com. Electronic document, <http://www.slate.com/id/2138176>.

The Produce Industry

Over the past two decades, amid concerns over health and the sheer availability of convenient pre-cut fruits and vegetables, the consumption of fresh produce has increased significantly^{44 45}. Today, the average consumer eats more than 725 pounds of fresh and processed fruits and vegetables, a 23 percent increase over 558 pounds in 1980^{46 47}. Produce sales today contribute to a greater share of grocery chain store profits—relative to gross sales—than any other grocery department⁴⁸. Supermarket produce departments have expanded dramatically nearly doubling the number of items stocked, from about 200 items in 1980 to nearly 400 items in 2003^{49 50}.

The produce supply chain

On its way to consumers, produce moves through three primary marketing channels: grower-shippers, wholesalers, and retailers⁵¹. In addition to handling their own produce, grower-shippers may also handle produce from other farmers. They own the packing sheds that assemble, wash, and pack produce and perform the post-harvest handling and packing activities, which contribute to the final cost of fresh produce at the retail level. From grower-shippers, produce moves to wholesalers, self-distributing retailers, and foodservice companies.

Wholesalers, the next vertical stage in produce distribution, can be merchant wholesalers or brokers. In moving produce from grower-shippers to various retail outlets, merchant wholesalers take title of the product they handle; brokers, while also serving as intermediaries for grower-shippers or for wholesale or retail buyers of produce, do not take ownership of the produce.

The majority of wholesalers are merchant wholesalers, which include broadline grocery wholesalers, broadline foodservice wholesalers, and specialized fresh fruits and vegetables wholesalers⁵². In serving retail stores and foodservice establishments, specialized produce wholesalers deal exclusively with fresh fruits and vegetables. Broadline foodservice and grocery wholesalers procure a wide range food as well as nonfood products. Foodservice wholesalers procure products specifically for foodservice establishments including restaurants, hospitals, hotels, and schools. From 1987 to 1997, wholesaler produce sales to foodservice customers increased from 8.4 percent to over 21 percent. By contrast, the role of grocery wholesalers as mediators between manufacturers and retail food stores is on the decline.

Today, more produce is shipped directly from grower-shippers to large retailers that operate their own distribution centers. These self-distributing grocery retailers, which also have their own buying offices and trucking fleets, circumvent wholesalers and forge direct supply agreements

⁴⁴ Eastwood, D., J. Brooker, C. Hall, E. Estes, T. Woods, J. Epperson, and F. Stegelin. 2004. *A Marketing Systems Approach to Removing Distribution Barriers Confronting Small-Volume Fruit and Vegetable Growers*. University of Georgia. Electronic document, http://web.utk.edu/~brookeoo/RESEARCH/SCSB_TN_s222.pdf.

⁴⁵ Handy, C. R., P. R. Kaufman, K. Park, and G. M. Green. 2000. Evolving Market Channels Reveal Dynamic US Produce Industry. *FoodReview* 23:14-20.

⁴⁶ Eastwood, Brooker, Hall, Estes, Woods, Epperson, and Stegelin 2004.

⁴⁷ Handy, Kaufman, Park, and Green 2000.

⁴⁸ Eastwood, Brooker, Hall, Estes, Woods, Epperson, and Stegelin 2004.

⁴⁹ Eastwood, Brooker, Hall, Estes, Woods, Epperson, and Stegelin 2004.

⁵⁰ Handy, Kaufman, Park, and Green 2000, pg. 11.

⁵¹ Handy, Kaufman, Park, and Green 2000.

⁵² Handy, Kaufman, Park, and Green 2000.

with grower-shippers⁵³. In 1987, just over 38 percent of all wholesaler produce sales went to retail stores; in 1997 that number declined to 34.6 percent.

Produce distribution in Western North Carolina

In Western North Carolina, fresh produce reaches consumers through direct markets (farmers' tailgate markets, Community Supported Agriculture (CSAs), roadside stands), local retail outlets (restaurants, grocery stores, specialty food stores, bed and breakfasts), and through institutional outlets including school and hospital cafeterias.

Western North Carolina producers can access niche markets by selling directly to consumers or in some cases by delivering directly to small and independently-owned retail outlets that retain the flexibility to buy directly from producers. Market segments that have embraced supply chain management practices—larger grocery store and restaurant chains and institutional buyers, for example—pose the greatest challenges to the small and mid-size producers that dominate farming in Western North Carolina⁵⁴. With respect to larger retail food outlets, the ability of farmers to access these markets depends on a retailer's system of procurement and distribution and the ability of farmers to satisfy volumes and price points, desire for year round produce, and post-harvest handling and packaging requirements. In addition, the use of centralized warehousing systems for distribution to individual chain outlets limits the ability of individual farmers to deal directly with individual restaurants or grocery stores in the region.

Despite these constraints, regionally-based systems of food procurement and distribution in Western North Carolina hold the potential to help local farmers overcome market constraints. Local packing houses, wholesale distributors, farmer cooperatives, systems of backhauling, and a state owned farmers' market are present in the region and provide viable models for increasing the distribution of local food to local markets. With increasing demand for local food, these systems are potential points of intervention that with further development could create space for smaller local farmers in a tightly integrated market.

Backhauling:

In Western North Carolina, a distribution infrastructure exists for backhauling farm products to grocery store chain outlets in the region. To maximize fleet utilization on return trips and expand the spectrum of product movement, self-distributing retailers that operate their own buying offices and own refrigerated trucking fleets are able to pick-up produce from farmers for further distribution to individual store locations⁵⁵.

Pooling of production:

Other possible distribution opportunities exist with locally-based packing houses, wholesale distributors, and farmer cooperatives. All three have the benefit of pooling production, which gives smaller local farmers the ability to capture the marketing and distribution advantages that come with larger scale. Wholesalers and packing houses, accustomed to marketing fresh produce, have the knowledge needed to meet the specifications of particular market segments and the infrastructure to cool, grade, package, and transport local farm products to different

⁵³ Handy, Kaufman, Park, and Green 2000.

⁵⁴ *Western North Carolina Food and Farm Economy*. 2007. Appalachian Sustainable Agriculture Project: Asheville, NC.

⁵⁵ See *Shelton Farms: Finding a Space in the Middle of Agriculture* in Appendix B for a case study that highlights backhauling

locations throughout the region. As models of distribution, packing houses and wholesale operations also have the added potential to meet the desire of buyers for year round supplies because, in addition to handling local product, they are also handling the produce of growers from other parts of the country⁵⁶.

While less able to deal with seasonality constraints, local farmer cooperatives have other advantages that enable them to enhance their collective power. In pooling their resources and sharing marketing, transportation, and distribution costs, cooperatives have the potential to help individual farmers overcome market constraints associated with the lack of post-harvest handling and packaging equipment and adequate transportation to deliver to different markets. In Western North Carolina, a number of farmer cooperatives have banded together to obtain the infrastructural equipment necessary to meet the standards of different market segments and reach institutional markets like hospitals and school cafeterias and larger grocery retail chains.

The Western North Carolina Farmers' Market:

The Western North Carolina Farmers' Market is one of five farmers' markets owned by the state of North Carolina and operated by the North Carolina Department of Agriculture and Consumer Services (NCDA&CS). Presently, the market sells a mix of local and nonlocal farm products but, as a means of local food distribution, it holds great potential.

The Western North Carolina Farmers' Market is a marketing hub where many of the region's residents, visitors, and small food businesses go to find farm-fresh food. The market is one of the largest venues for fresh fruits and vegetables in the region and includes both retail and wholesale operations. Farmers have opportunities for large and small scale, direct sale and wholesale, and year-round marketing of farm products. On the market's site, farmers can sell direct to consumers or to small food related businesses. Farmers can also sell wholesale to vendors in the retail section of the market—where shoppers can purchase a variety of goods including fresh produce, baked goods, meats and cheeses, and trees and plants—and to packers, wholesalers, and farmer cooperatives who operate out of the market and sell to grocery stores, restaurants, institutions, and roadside markets in Western North Carolina and other regions.

The Beef Industry

Beef production is the largest segment of the U.S. agriculture economy⁵⁷. In 2005 farm cash receipts from cattle and calves were estimated at \$49.5 billion, and the retail value topped \$79 billion⁵⁸. Since 1998, consumer demand for beef has increased 20 percent; consumer spending has grown \$20 billion since 1999⁵⁹.

In the United States there are about 800,000 beef producers, with different types of producers present in all 50 states⁶⁰. Beef operations vary in size from just a few cows to thousands of cows. Half of all cattle raised in the United States are produced by farmers and ranchers with fewer than 100 head; almost one-third have less than 50 head⁶¹. Five percent of operations have more than 1,000 head, but they finish more than 80 percent of all grain fed cattle.

⁵⁶ See *Mountain Food Products: Serving the Local Community* in Appendix B for a case study of a local wholesale distributor

⁵⁷ Stull and Broadway 2004.

⁵⁸ Cattle-Fax, <http://www.cattle-fax.com/>

⁵⁹ Cattle-Fax, <http://www.cattle-fax.com/>

⁶⁰ Cattle-Fax <http://www.cattle-fax.com/>

⁶¹ National Cattlemen's Beef Association, <http://www.beef.org/>

The beef supply chain

The beef supply chain encompasses cow-calf operations, feedlot operations, packing plants and processors, wholesale distributors, and retailers and foodservice operators. The process begins with cow-calf production; in this kind of operation, the product is the calf. Cow-calf producers breed animals and raise them on range or open pasture land for up to one year. From there, calves are sold to other beef cattle operations. When cattle have reached a suitable weight, “feeder” weight, they are sold through livestock auction markets in different locations across the United States, which transfers ownership to feedlot operators. Most calves go to feedlot operations located in the Midwest, the Southwest, and the Pacific Northwest where there are abundant supplies of grain to continue feeding the calves⁶². In feedlot operations cows are finished in three to six months, weighing between 1000 and 1200 pounds. Some calves, before going to feedlot operations, may be backgrounded. Backgrounder calves are lighter in weight and are purchased by “stockers” another type of intermediary that puts calves on pasture until they are ready to go to feedlots. Feedlots have marketing arrangements with meat packing plants, and once cattle have reached slaughter weight, they are purchased by the plants. Packing facilities process the animals and most fabricate major primal cuts into subprimal cuts or market-ready cuts that are sold to retailers and foodservice operators. Some plants sell primal cuts to other intermediary processors who process them into individual steaks and roasts or ready-to-cook marinated and pre-cooked items. From beef packers and processors, beef products move directly to retailers and foodservice operators by means of intermediary wholesale distributors.

Beef distribution in Western North Carolina

Of the approximately 63.5 millions of pounds of beef produced in Western North Carolina, only a small proportion of it is actually finished and processed in the region and marketed locally. The beef industry in the region is dominated by cow-calf production. Operations are generally small, and the number of full-time beef producers is also small because cow-calf operations are not profitable. In general, beef is a low value animal, and cow-calf producers are more susceptible to the cycles of supply and demand that determine commodity pricing⁶³. Despite the low profitability, these kinds of operations have remained more stable in the mountains of Western North Carolina than other types of farming endeavors because the care of the calves themselves is less demanding and many farmers are not dependent on these operations for their primary source of income⁶⁴. Most beef producers in the mountains sell calves to supplement other off-farm income.

In Western North Carolina, grain-fed beef is cost prohibitive. In terms of finishing beef cows, it is more economically efficient to take the animals to the source of feed one time versus importing load after load of feed to finish the cows in a grain deficient region like Western North Carolina. Beef finished and processed in the region is often grass-fed or grass-finished beef. Local producers use independent processing facilities, and they sell their product directly from on-farm stores and area farmer tailgate markets or through local retail outlets.

⁶² National Cattlemen’s Beef Association, <http://www.beef.org/>

⁶³ Clause, R. 2006. *Commodity Beef Profile*. Agricultural Marketing Resource Center, Iowa State University.

⁶⁴ Boyle, J. 2007. *Like Other Farming, Beef Cattle Future is Waning in the Mountains*. Asheville Citizen Times, Asheville, NC.

With growing demand for naturally raised beef products by health conscious consumers and consumers concerned with animal welfare, there is potential for expanding local markets for locally produced grass-fed products^{65 66}. Much of the land in Western North Carolina is suited for grazing, and producers, motivated by local consumer interest, are exploring the possibility of expanding into grass-fed beef market. Farmer groups are looking at the economic feasibility and experimenting with rotational grazing; one farmer group is experimenting with locally-grown corn silage, which would supplement the diet of pasture-raised animals.

Despite interest by producers and consumers, the infrastructural obstacles for proper handling and distribution are considerable. Grass-fed and grass-finished beef requires not only land for pasture but on-farm animal handling facilities, access to a USDA-inspected processing facility that adheres to all of the federal regulations from animal treatment to water quality to packaging and labeling, transportation to and from meat processing facilities, and adequate cold storage for processed meat products. Operations that finish beef also require cow-calf producers learn and adopt new practices (more closely managed grazing and pasture management, for example). The absence of a USDA-inspected slaughter facility in the immediate region is a significant impediment to local beef production. Currently, grass-fed producers transport animals to independent processing facilities located outside the region from one to two hours away or more. The additional costs, i.e., time and money, associated with travel for processing makes this option unappealing for many producers.

While limited on-farm processing is an option for poultry and rabbit, on-farm processing for beef producers is not feasible given the strictness of the regulations. The absence of independent meat processing facilities means that farmers must incur additional costs to travel to processing facilities. Given the small number of producers that finish beef in the region, there is some doubt as to whether there is enough current production to support a centrally-located beef processing facility. With more processors, however, more beef producers may enter the market.

The Poultry Industry

The United States is the largest producer of poultry in the world and the second largest exporter⁶⁷. Annually, U.S. poultry meat production exceeds 40 billion pounds; the total farm value is over \$20 billion. Broiler production constitutes the majority of this value.

The U.S. poultry industry is deeply vertically integrated and the vast majority of U.S. poultry producers are contract growers for poultry processors⁶⁸. Poultry processors contract with growers to raise birds in accordance with specific standards. Processors supply the animals, feed, and veterinary medicines; growers provide the labor, facilities (“grow-out houses”), and utilities—heating, cooking, feeding, and watering systems. Processors schedule the transportation of the birds from the farm to the processing plant. Tyson Foods, one of the largest

⁶⁵ Freeman, S. 2007. "Livestock Farms Grow in WMass," in *The Republican online*, <http://www.masslive.com/springfield/republican/index.ssf?/base/news-1/117308602410530.xml&coll=1>.

⁶⁶ Ness, C. 2007. "Au Revoir to Foie Gras: Wolfgang Puck is Biggest Name Yet to Ban Delicacy from His Restaurants' Menus," in *SFGate.com*, <http://www.sfgate.com/cgi-bin/article.cgi?file=/c/a/2007/03/22/MNG4COPHSG1.DTL>.

⁶⁷ USDA ERS Briefing Room. Poultry and Eggs. 2007. <http://www.ers.usda.gov/Briefing/Poultry/>

⁶⁸ Ibid.

poultry processors⁶⁹, owns breeder farms and hatcheries and produces its own animal feed⁷⁰. Birds are processed in its own facilities and then warehoused in one of two Tyson-owned distribution centers. Thirty million pounds of product are shipped from one of these two facilities each week and distributed to retail and foodservice locations throughout the country by Tyson's own trucking fleet.

Poultry distribution in Western North Carolina

North Carolina is one of the top broiler-producing states⁷¹. Wilkes County in Western North Carolina, where Tyson Foods operates three processing facilities, is one of the largest producers of poultry in the Eastern United States; in 2005, the county produced 90,000,000 broilers⁷².

Poultry producers in the region selling to local markets raise birds in small quantities on pasture and can sell direct to consumers at farmers' tailgate markets or from on-farm stores. As with beef, the absence of an independent processing facility in the region is a significant barrier to the expansion of poultry production for local markets. A separate group is exploring the feasibility for establishing a regional, independent USDA-inspected small animal processing facility for processing poultry and rabbit meat⁷³.

Expanding poultry production may also include work focused on policy change. Processing requirements for poultry vary from state to state. North Carolina state guidelines limit the number of small animals that can be processed on-farm to 1,000 chickens or rabbits or 250 turkeys per year per farm, an option not viable for larger-scale producers of poultry⁷⁴. Increasing bird limitations could significantly increase production. In Virginia, for example, farmers are able to process up 20,000 birds on-farm⁷⁵.

The Dairy Industry

Total annual production of milk in the United States is about 170 million pounds⁷⁶. In 2004, farm cash receipts from milk sales were estimated at \$27.4 billion, accounting for about 11.4 percent of total cash receipts from agricultural commodities⁷⁷.

Regardless of size, most dairy farms in the United States are family-owned and managed, and farmers typically belong to producer-owned cooperatives⁷⁸. Dairy cooperatives pool members' milk and move it to processors and manufacturers. Because milk production varies by day and week and according to seasonal fluctuations in weather and feed conditions, cooperatives pool raw milk to meet the demand of fluid milk processors.

⁶⁹ Hendrickson, M., and W. Heffernan. 2005. *Concentration of Agricultural Markets*. Department of Rural Sociology, University of Missouri. Electronic document, <http://www.foodcircles.missouri.edu/consol.htm>.

⁷⁰ Tyson Foods. 2007. <http://www.tyson.com/Corporate/AboutTyson/LiveProduction/Chicken.asp>

⁷¹ USDA ERS Briefing Room. Poultry and Eggs. 2007.

⁷² NCDA. Agricultural Statistics. County Statistics. Wilkes County. <http://www.agr.state.nc.us/stats/cntysumm/wilkes.htm>.

⁷³ More information is available from the Center for Assessment and Research Alliances, Mars Hill College.

⁷⁴ NCDA. Meat and Poultry Division. 2007. http://www.ncagr.com/vet/meat_poultry/index.htm.

⁷⁵ VDACS. Regulatory Services. Meat and Poultry Program Definitions 2007, <http://www.vdacs.virginia.gov/meat&poultry/definitions.shtml>

⁷⁶ USDA ERS Briefing Room. Dairy. 2007, <http://www.ers.usda.gov/Briefing/Dairy/.htm>.

⁷⁷ Miller, J. J., and D. P. Blayney. 2006. *Dairy Backgrounder*. USDA/Economic Research Service.

⁷⁸ Miller, J. J., and D. P. Blayney. 2006. *Dairy Backgrounder*. USDA/Economic Research Service.

Dairy farms are more specialized than most other types of farm operations and accordingly have particular equipment and facility needs. Dairy farmers require facilities to milk cows and to store milk and cool milk. They also need the equipment to test milk for antibiotics, bacteria, and somatic cell counts before it is picked up by milk haulers, who are either independent operators and charge farmers a pick up fee for their services or who are vertically integrated with dairy processing facilities.

Dairy farmers also tend to have fewer sources of off-farm income than other farmers making them more dependent on farm-generated income⁷⁹. Taken together, these factors make dairy farms particularly susceptible to price volatility, which has been severe in the industry in recent years⁸⁰.

The dairy industry has experienced similar consolidation and concentration as other farm sectors. From 1970 to the early 2000s, the number of dairy operations in the U.S. decreased from about 650,000 operations to about 90,000 and average herd size increased five-fold from 20 cows to 100 cows. Each year more milk is produced on fewer farms. While operations with 500 or more milk cows represented only 3.7 percent of all dairy farms in 2004, they produced 47 percent of the milk. Consolidation has also occurred in processing and fewer firms are processing raw milk into fluid milk and other manufactured products.

The dairy industry has also seen changes in dairy product demand. In 1975, fluid milk products represent 50 percent of milk utilization. Today, about one-third of milk is processed into fluid milk and cream products, and the remaining two-thirds is processed into a variety of dairy products including cheese, yogurt, butter, ice cream, dry or condensed milk, and whey products used primarily as ingredients in processed foods. Cheese in particular has become the dominant end-product for raw milk; a little over half the milk supply is processed into nine billion pounds of cheese annually⁸¹. Increasing demand for cheese as well as for butter and other manufactured dairy products reflects a shift in the dairy market from retail sales to restaurant and food processor sales⁸². Food processing and away-from-home eating now account for the majority of dairy product usage.

Dairy distribution in Western North Carolina

Dairy farming in Western North Carolina is primarily a family operation, and most dairy farms in the region are relatively small. In a recent survey of dairy farmers in the region, three-quarters of farmers completing the survey reported an average herd size of less than 200 cows⁸³.

Annually, the dairy industry in Western North Carolina produces over 252 million pounds of milk⁸⁴, and fluid milk is marketed cooperatively. Dairy farmers in the region typically belong to one of three dairy cooperatives: Dairy Farmers of America, a national cooperative; Piedmont

⁷⁹ Miller, J. J., and D. P. Blayney. 2006. *Dairy Background*. USDA/Economic Research Service.

⁸⁰ See Miller, J. J., and D. P. Blayney. 2006. *Dairy Background*. USDA/Economic Research Service for a more in-depth discussion.

⁸¹ USDA ERS Briefing Room. Dairy. 2007. <http://www.ers.usda.gov/Briefing/Dairy/>

⁸² Miller and Blayney 2006, pg. 3-4.

⁸³ A Survey of Licensed Dairy Farms in Western North Carolina. 2007. Appalachian Sustainable Agriculture Project. Asheville, NC.

⁸⁴ USDA Census of Agriculture data

Milk Sales Inc.; and the Maryland and Virginia Milk Producers Coop. Fluid milk or cheese processors contract directly with these organizations for much larger amounts of milk than any individual farmer is able to provide. When there is a shortage of milk availability in the region (due to seasonal fluctuation in production levels, for example) milk is imported from other areas of the country; local farmers are required to pay part of the transportation costs for this importation. In Western North Carolina, milk haulers are independent operators who charge the farmers a pick up fee for their services.

Western North Carolina is unique in that the infrastructure for large-scale milk processing and distribution still exists. Milkco, an Asheville-based milk processing and packaging plant, produces 53 million gallons of milk annually. Milk processed at Milkco provides one regional grocery store chain with nearly all of its fluid milk needs and rough estimates are that 80 percent comes from local dairies in the region⁸⁵. Western North Carolina is also home to a large cheese processor, Ashe County Cheese Store, which produces about 2.3 million pounds of cheese annually. Rough estimates are that 75 percent of the raw milk comes from local dairies.

Some small dairy farmers have focused on reaching niche markets with the production of value-added products like artisan cheese, yogurt, butter, and frozen dairy products. These producers sell directly to consumers at tailgate markets or on-farm stores or by delivering directly to local retail grocery outlets.

Direct Markets

Despite consolidation in the food industry and the increasing distance between consumers and farmers with brokers, wholesalers, supermarkets, and other middlemen, direct marketing of farm products through farmers' markets, Community Supported Agriculture (CSA), roadside stands, and on-farm sales continue to be valuable market outlets for farmers in the United States.

Farmers' Markets

As a means of food distribution, farmers' markets provide important urban-rural linkages, and in eliminating middlemen, enable farmers to command higher prices for their goods. Over the past decade the number of farmers' markets in the United States has grown alongside increasing consumer interest in finding fresh products from the farm^{86 87 88 89 90}. The USDA reports that the number of farmers' markets increased almost 20 percent, from 1,755 in 1994 to 4,385 in 2006⁹¹. The results of a 2006 USDA National Farmers Market Survey shows that in addition to growth in the number of farmers' markets, 25 percent of vendors from surveyed farmers' markets relied on these markets as their sole source of farm-based income⁹².

⁸⁵ Personal Communication. 2007. Buddy Gaither, President of Milkco. Asheville, NC.

⁸⁶ Ecotrust. 2003. *2003 Annual Report*. Ecotrust. Online document, <http://www.ecotrust.org>.

⁸⁷ Locally Grown Food Strategic Positioning Research. 2004. Research Inc: Atlanta, GA. (Appendix A)

⁸⁸ DeCarlo, T.E., Franck, V.J., Pirog, R. *Consumer Perceptions of Place-Based Foods, Food Chain Profit Distribution, and Family Farms*. 2005. Leopold Center for Sustainable Agriculture. Ames, IA.

⁸⁹ Pirog, R. *Ecolabel Value Assessment: Consumer and Food Business Perceptions of Local Foods*. 2003. Leopold Center for Sustainable Agriculture. Ames, IA

⁹⁰ Pirog, R. *Ecolabel Value Assessment Phase II: Consumer Perceptions of Local Foods*. 2004. Leopold Center for Sustainable Agriculture. Ames, IA.

⁹¹ USDA AMS. Farmers Market Growth. <http://www.ams.usda.gov/farmersmarkets/FarmersMarketGrowth.htm>.

⁹² USDA AMS News Release 2006. <http://www.ams.usda.gov/tmd/MSB/>

Farmers' markets have specific infrastructural requirements. In cooperation with local businesses and city or county governments, they require a permanent and convenient location with adequate space for vendor stalls, parking for shoppers, and in some cases restroom facilities. For uncovered markets like many of those in Western North Carolina, vendors need tents, tarps, or some other kind of shelter to protect products and delineate their stalls, and they need tables or shelving to display their products, as well as adequate refrigeration and storage units for products like meat, eggs, and cheese.

Farmers' Markets in Western North Carolina

Thirty-four farmers' tailgate markets are in operation in Western North Carolina⁹³. Markets in Buncombe, Madison, and Yancey Counties are members of the Mountain Tailgate Market Association, a farmer-run organization that formed to pool resources and promote local markets in the three-county area⁹⁴.

Recent surveys of tailgate market shoppers and vendors indicate opportunities for market growth^{95 96}. This potential is tied partially to increasing the number and location of markets convenient to consumers throughout the region. The results of a 2004 survey to shoppers at tailgate markets in Buncombe and Madison Counties indicated, for example, that the majority of tailgate market shoppers lived within five miles of specific markets.

Vendor surveys conducted in 2003 at Buncombe county markets pointed to a high level of interest in a new, centrally located grower market in Asheville. The central market, which is scheduled to open in 2008 and accommodate up to 100 vendors, has the potential to significantly expand direct market opportunities for a broad range of local farmers and attract a wide range of consumers from inside and outside the region.

Increasing market opportunities for farmers' markets may also encompass expanding the reach of local markets into low-income market segments. Current USDA programs like the Women, Infants, and Children (WIC) Farmers Market Nutrition Program and the Senior Farmers Market Nutrition Program enable program beneficiaries to shop at farmers' markets for fresh foods. Nationwide the USDA reports that almost 60 percent of markets participate in farmers market nutrition programs⁹⁷. The USDA's Food and Nutrition Service reveals that coupons redeemed through the Farmers Market Nutrition Program resulted in over \$23 million in revenue for farmers in 2005⁹⁸.

In Western North Carolina, farmers' markets in eight Western North Carolina counties participate in the WIC program; markets in four counties participate in the Senior Farmers Market Program. Program recipients in these counties received coupons to purchase locally-grown fresh fruits and vegetables directly from farmers or from local farmers' markets.

⁹³ This number includes farmers' markets listed in ASAP's Local Food Guide.

⁹⁴ See the breakout box on the Mountain Tailgate Market Association in main the report, pg 25.

⁹⁵ *A Market Analysis of Tailgate Farmers' Markets of Buncombe and Madison Counties*. 2004. Appalachian Sustainable Agriculture Project, Asheville, NC.

⁹⁶ *Results from a Survey of Farmers' Tailgate Market Vendors in Buncombe and Madison Counties*. 2003. Appalachian Sustainable Agriculture Project, Asheville, NC.

⁹⁷ USDA AMS. Farmers Markets. <http://www.ams.usda.gov/farmersmarkets/FMstudystats.htm>.

⁹⁸ FNS USDA. <http://www.fns.usda.gov/wic/FMNP/FMNPfaqs.htm>.

Any vendor or market can apply to accept food stamps. Accepting food stamps, however, can be logistically problematic for markets that traditionally operate on a cash economy. In the Food Stamp Program, EBT (Electronic Benefit Transfer) cards, which are similar to ATM cards, replaced paper coupons. To streamline the process, some farmers' markets have established point-of-sales (i.e., swiping) terminals. Because farmer's markets and farm stands usually operate in environments without access to electric power or land-lines are not readily available, the use of these terminals is not always feasible. In the eastern part of the state, markets in Carrboro, Hillsborough, and Durham began accepting EBT cards last year as part of a pilot program⁹⁹. To maintain the program, it will cost markets about \$4000 to staff a central terminal where EBT and debit cards are swiped and hand out the tokens that those customers use to make purchases.

Food Processing in Western North Carolina

With processing capabilities for meats, dairy products, and fruits and vegetables comes the ability to increase farm profitability with value-added products, to mitigate seasonality constraints, and to expand into new markets. With about half of each food dollar spent in the United States on convenient, ready-to-eat food, the loss of local and regional processing capabilities is significant. Processing facilities, for example, may play an important role in allowing producers access to the foodservice industry. A recent study conducted by the Leopold Center, which features the SYSCO Corporation, suggests that the foodservice industry is a viable market for smaller farmers and food businesses¹⁰⁰. In trying to differentiate its products from the products of other foodservice distributors, SYSCO seeks business relations with small to midsize food entrepreneurs. Furthermore, SYSCO's procurement and distribution system enables individual distribution centers to operate independently and make purchasing decisions at the local level. The relative flexibility of this system has enabled at least one college in the Western North Carolina to obtain locally-grown produce. With strong consumer demand for convenience foods and growth in the foodservice industry, processing facilities provide farmers with means to expand into other market segments.

Despite the loss of large-scale processing options in Western North Carolina, significant pieces of processing infrastructure still exist in the region. The processing facilities available for dairy have already been noted. Processing options for fruit and vegetables within the region include small-scale operations like using one of the region's commercial shared-use kitchens to larger-scale operations. At least two large-scale juice processors are still operating in Western North Carolina; although both processors are currently importing concentrated juice, they provide opportunities for expanding local fruit processing.

For smaller-scale processing, the region has a number of shared-used kitchens where farmers, chefs, and other food entrepreneurs can rent kitchen space and equipment by the hour. While the long term financial viability of these types of facilities is unknown, shared-use facilities provide food entrepreneurs access to licensed processing facilities with little capital investment; setting-up a commercial kitchen that meets specific federal and state health regulations can be

⁹⁹ Hoppenjans, L. *Food stamps get an 'in' at farmers markets*. NewsObserver. <http://www.newsobserver.com/102/story/551328.html>.

¹⁰⁰ Ennis 2006.

expensive. Additionally, shared-use kitchens offer other services such as food safety training, access to technical information, guidance on product development, package design, sales and marketing assistance and training, and small business development and planning. In Western North Carolina, a number of food entrepreneurs looking to distinguish their products in the marketplace have chosen to source ingredients locally.

Conclusion

This report has examined the structure of the food industry and its implications for farmers in Western North Carolina that want to grow for a local market. With increasing concentration in the food system, smaller and smaller numbers of companies dominate each stage of food production. Supply chain management practices streamline systems of food procurement and distribution, and these vertically-integrated systems exclude smaller farmers as well as smaller-scale food businesses. Rebuilding the capacity for local food production and distribution depends on building the capacity for regional systems of food procurement and distribution.

This report has examined the procurement and distribution systems for produce, beef, poultry, and dairy products and has identified regional models of food distribution in Western North Carolina. Systems of backhauling, cooperative strategies that pool the resources and products of local farmers, and direct marketing channels have the potential to overcome the market barriers facing local farmers. Infrastructure interventions will include practical steps designed to make it easier for local farmers to sell their farm goods to local markets. Steps may involve adapting existing components of the food distribution system to accommodate local and establishing new facilities for local processing in the region.

- *Backhauling.* As demand for locally produced food increases, regionally based self-distributing grocery stores may provide a key element of local food procurement and distribution in Western North Carolina. Because backhauling meets the desire of self-distributing retailers to maximize efficiency, as a means of food distribution, retailers may have more incentive to develop backhauling systems.
- *Pooling production.* In meeting the requirements of larger-scale markets, packing houses, wholesale distributors, and farmer cooperatives provide local farmers with the infrastructure to meet the handling and packaging standards of particular market segments and overcome volume constraints. Packers and wholesalers, in working with producers from different regions, have the added potential of overcoming seasonal constraints and make it more convenient for grocery stores, restaurants, and institutional buyers—who are accustomed to and prefer the ease of buying from one or two larger suppliers—to support local.
- *Developing the capacity of the Western North Carolina Farmers Market.* As a well-established and centralized market, the Western North Carolina Farmers' Market represents a substantial piece of infrastructure for small and mid-size farmers in Western North Carolina who wish to sell their products locally. Beyond being a sizable retail store for farm-fresh food, the market is a collection of many packers, wholesalers, and farmer cooperatives accustomed to marketing fresh produce.
- *Expanding local food distribution through direct marketing channels.* The proliferation of farmers' markets across the country signals growing demand for fresh local food. By

eliminating middle men, direct marketing through channels like farmers' markets have the potential of returning more of the food dollar to farmers and increasing their economic viability. Expanding this means of food distribution will include increasing the number of markets and locations and will require the support and cooperation from city and county governments and local businesses. Expanding direct market opportunities for farmers must also look at ways to increase food access to low-income market segments through, for example, USDA programs like the Farmers Market Nutrition Program.

- *Building regional processing capabilities.* In re-appropriating the food market from large, distant food businesses, regional processing is a significant consideration. Efforts to recapture the market need to consider the convenience and product offerings consumers expect when they shop for food. With strong demand for ready-to-eat foods, processing capabilities make it possible for a broader range of consumers to buy local foods.

Food Policy Councils:

What and Why?

Prepared for:



by

Ginger Kowal

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The first Food Policy Council (FPC) was conceived in Knoxville, Tennessee in the late 1970s as a way to serve the food needs of the city of Knoxville. The idea was to have a Department of Food to coordinate food distribution and access for Knoxville's citizens, like other government departments which also serve needs that are so basic to a community. As other cities and counties across the country picked up the idea through the 80s and 90s, additional interpretations of what a FPC should be came up in local contexts. Although the form that each FPC takes is foremost a response to needs and strengths of the local area, it can be generalized that FPCs are meant to facilitate cooperation among stakeholders in a local food supply system, and to provide those stakeholders with some coordinated influence in local government.

Structure

FPCs have been generally formed in cities with large populations (more than 150,000), and are associated with a limited geographical area such as a metropolitan district or a county (depending on the governmental office that they are tied to). There have been several state-wide FPCs initiated, including one for North Carolina that has since become less active. Locally-focused FPCs typically consist of a steering committee of 10-20 volunteers who have some stake in the food system, whether in private distribution, processing, retail, hunger relief, health and nutrition, or farming. These steering committee members are often appointed by the mayor or by the current FPC president. Some FPCs (most notably Berkeley, CA) also have much larger voting bodies with open membership, so as to include as much community input as possible.

The most successful FPCs have historically included a staff member from some governmental office, usually the Mayor's office, to act both as organizational support staff and as liaison to his or her governmental office. (This is one means of government support that is often given in lieu of funding, discussed below.) Many FPCs are connected, either informally or formally, to outside organizations such as nonprofits and research centers, who may provide advisory guidance to the FPC and help to build community awareness about FPC activities. The degree of connection both to the government and to related organizations seems to be a key in the sustainability and effectiveness of FPCs. When strengthened by these connections, the FPC can become effectively a coordinating center of communication between government, food system players, and community advocates.

Role

The role of the FPC in local government and community varies widely by individual group, but most serve in either or both of two capacities: as an advisory group to a certain governmental office (such as City Council, the Mayor, or County Board of Commissioners), or as sources of education to the general public. Several FPCs provide an annual report on the state of the local food system, either to their government bodies or to the public. This appears to be a helpful means of maintaining connection with and investment from both the government and the public. Many FPCs can and do make policy proposals to their respective government offices, but only one (the St. Paul Food and Nutrition Commission) has any power to enact or block them. The St. Paul Commission reviews the food-related programs and activities of other city departments.

Funding

Funding can come from a variety of sources. Some FPCs are funded partially by government agencies and partially by grants; others rely on private donations; still others run with no funding and instead require that their members make yearly donations. Funds are almost always used to provide staffing and to produce educational materials in print. A successful scheme implemented by several city governments is to designate city (or county) employees as part-time staff to the FPC, which helps to facilitate linkages between the FPC and the government as well as providing structural support.

Accomplishments

The accomplishments that can be attributed to FPCs across the country are as diverse as the specific needs that the councils themselves exist in response to. Several of the first municipal FPCs to arise in the 80s and 90s changed public transportation routes to make it easier for low-income residents to reach food stores. Many have also implemented community gardening programs in their cities or helped to create ordinances whereby community gardens are exempted from city fees, such as for water access. The Berkeley Food Policy Council worked with Berkeley City Council to pass a Food and Nutrition Policy for the city, a guide for the city's development before 2010; the Berkeley FPC also assisted in the development of a Unified School District Policy, calling for local and organic foods, as well as food from school gardens, to be used in school cafeterias. The annual reports of many FPCs, as well as monthly or quarterly newsletters produced by some, serve as reminders to the public of food issues in the community and ways to help the community improve.

Other FPCs have dispensed recognition of both positive and negative events in their community, such as making the public aware of unfair pricing practices by supermarkets and recognizing community groups for their positive contributions to the local food system with yearly awards. The Onondaga Food System Council provided a public Directory of Informational Sources that held information about agencies, organizations and businesses involved in the local food system. The Toronto FPC helped to research and design a commercial kitchen incubator for the city, initiated a "Buy Ontario" campaign to increase local foods served in area hospitals, and organized the first North American Conference on urban agriculture.

The most significant advantage that a FPC has to offer their community seems to be in their ability (when given appropriate resources) to coordinate diverse segments of business and nonprofit organizations in the food system, to serve as a forum for discussion and collaboration between these stakeholders, and to provide a unified public interface which both the government and the public at large can turn to for information and guidance about the food system.

Challenges

By far the most common difficulty faced by FPCs is in gaining the funding and attention from government that they need to be effective, and this is a common reason given for the dissolution of FPCs in the past. Lack of consistent staff support is also a common stumbling block. FPCs that are well funded must constantly distinguish themselves from other government agencies and

from area nonprofits, and prove that the services that they provide are not already provided by existing groups. Coordinating meeting time and finding sufficient time to meet is sometimes difficult with the busy members of FPCs, especially if they don't understand their role in the committee or the role of the council itself. FPC members who are appointed to the council without sufficient understanding of their responsibilities are often unable to provide sufficient participation.

Indicators of Success

Some features of FPCs that seem to lead to success are a high level of support (both financially and politically) from their associated governmental organizations, strong staff integration with government offices, and a high degree of connection to other agencies and nonprofit groups working in the food system. It is this web of relationships that seems to sustain FPCs long-term. City size has been found in the past to be an accurate predictor of success (smaller cities are more likely to have successful FPCs than larger ones), although this trend may be changing. In general, it is probably simply easier to coordinate stakeholder schedules in the smaller food systems of small or medium-sized cities. A strong emphasis on hunger and food access issues also seems to have a negative impact on the long-term success of FPCs; perhaps partly in response to this pattern, many of the newer FPCs that have been formed in recent years have dedicated themselves from the beginning to environmental and economic sustainability.

APPENDIX B: Case Studies

The following case studies present illustrative examples of business, farms and individuals in Western North Carolina that are experiencing the obstacles and opportunities inherent in the local food system. They also present narrative portraits of some of the region's most successful participants in the local food economy. They are real-life examples to follow from within the system that is the subject of this study.

Title	Pages	Research Sections Addressed
<i>Early Girl Eatery: Recipe for Success</i>	2B – 4B	Restaurant markets for local farm products
<i>Madison County Public Schools: Another Link in the Chain</i>	5B – 7B	Farm-to-School relationships, Distribution issues
<i>Freeman's Farm: Growing Trust in the Fields</i>	8B – 9B	Direct markets
<i>Shelton Farms: Finding a Space in the Middle of Agriculture</i>	10B – 13B	Distribution, packaging, scale in agricultural production
<i>Mountain Food Products: Serving the Local Community</i>	14B – 16B	Distribution
<i>Cane Creek Valley Farm: Catching up to Stay in Place</i>	17B – 19B	Transition from dairy to direct markets, organic

Early Girl Eatery: Recipe for Success

John and Julie Stehling opened Early Girl Eatery in a small building on Wall St. in downtown Asheville in September of 2001. In a city where excellent restaurants seem to come and go with each season, Early Girl has not only weathered the last five years but has emerged as one of the most popular eating destinations in Asheville, with a reputation that has spread nationally. The restaurant features local food at all times of the season, although you won't find it prominently advertised on the menu or on the specials board. John Stehling has worked personally with area farmers since even before the restaurant opened, and as the movement towards local food has expanded in the region, so have his local offerings.

Early Girl has been distinguished from its beginnings by its fealty to regional cuisine and its understated devotion to the local community. "It's always been important to me to give back to my community," John says. "I grew up with that value. Working in the restaurant business, I knew I wouldn't have a lot of time or money to give to the community, so working with local providers as much as I can is one way that I can do that." Over time, John has watched the idea of local food become much more fashionable in the restaurants around him and across the country. "We've never really gone out of our way to advertise our local stuff," he explains. "Buying locally is something that's important to me personally, and so it's always been important on a business level too." It has worked out nicely, however, that these attributes of the business that are personally meaningful to John happen to be meaningful and attractive to his customers, as well.

After working in restaurants in Vermont, Massachusetts, Colorado, and Charleston, South Carolina, John moved back to the mountains that he had loved as a child. He started Early Girl with a strong focus on comfort food, made from scratch from healthy ingredients – the food that he had grown up with. "I wanted to stick with the food that I was good at preparing, the food that I liked preparing," he says. The customers that come to Early Girl, and especially those that return (and most do) respond to the wholesome, healthy food cooked Southern style. "People who come here really care about health, the environment, and they're looking for the local fabric of the area. I think they really appreciate the feeling of healthy, clean, small, family atmosphere that our restaurant provides. And that's what they get with our local products."

This positive response from customers, and the word of mouth through the community that has always been the restaurant's primary means of advertising, is what fills Early Girl's tables for every meal and creates crowds of waiting customers on Wall Street at Sunday morning brunch time. But John insists that he buys locally because he knows it's the right thing to do – not because it helps his annual sales. Six months before the restaurant opened, he and his wife Julie made trips around western North Carolina to find local farms to source from. "We did the legwork ourselves," says John. "Now with ASAP's work to identify and promote local farmers, especially with the *Local Food Guide*, that kind of thing is a lot easier."

And the numbers reflect this. In the first year of business, Early Girl was buying 50% of its cheeses, 40% of its meat, and 30% of its produce in season locally. "We were careful not to advertise our local purchases much when we first started, because we wanted to be really sure that we could walk the walk, and really follow through on buying local before we started telling

people about it.” Even now, local products aren’t featured except in small, consistent ways: “Our waitstaff is well informed, so that when customers ask about our products they can find out if they’re local. And we put a little tidbit on our menu about our local farmers, and when we have local specials we mark them that way. But we don’t make a big deal out of it.”

Though buying locally has always been a part of John’s personal value, it hasn’t always held such value in the wider market. Over the years, John has watched as a trend towards healthy, natural and local foods has grown to include more and more people, and more and more restaurants in the area. “As the world becomes more homogeneous and unified,” he explains, “I think people are looking for identity and uniqueness, something distinguished from the rest. Part of that is in our vegetables, our food. People can find that in local food.”

As the local food movement in western North Carolina has become stronger, more producers have started to make their products available to local chefs. Early Girl has also become known, especially among produce growers, as a dependable buyer of local products. “People call all the time,” John says. “And if a friend at another restaurant is buying from a local person that I don’t know, I’ll tell them to pass my name along to the grower.” Citing factors like increased availability, increased production from some key farm partners, increased communication between local producers and local buyers, and relationships with individual growers that have grown stronger over time, John says that his purchases of local products in all categories have grown since the opening of the restaurant. Local purchases of meat have increased to 75%; cheeses to 70%; fish to 50%; and produce in season to 60%. Also, because of new offerings from growers in the area (most notably Fullam Creamery), John has been able to start offering local dairy – something that he says he would love to be able to do more of.

Over the years, John has found ways to tweak his recipes to be able to use local ingredients. Instead of using Vermont cheddar, he now uses local farmstead cheese from Yellow Branch Farm; when he added a cheeseburger to the menu using Springhouse Meats beef, he was able to increase his local meat purchases hugely with just that one item. The amount of local food that he is able to purchase from producers is a delicate balance between demand from customers, supply from producers, and storage capacity at the restaurant – some of which he has been able to modify over time.

Because it is part of his culinary style to make Early Girl’s food from scratch, it doesn’t present a large problem to receive raw ingredients from individual growers. The most important piece of being able to buy locally, John says, is staying flexible. “There was definitely a learning curve at first,” he mentions. “Both I and the growers had to learn to be flexible with each other, to maintain communication, and to build our relationship.” “Because we have an abundance of local providers here, I can choose who I want to work with. And the people that I want to work with are straightforward with me, they tell me what they have and when something’s not working.” And once he establishes that relationship with a grower, he remains loyal. “I’ve been buying grits from the same man for years,” starts one story. “He’s ninety-two years old now. And if someone else were to come to me and offer me a better price, I wouldn’t take it. This man and I have a personal relationship. We take care of each other.”

The growth of the local food movement in western North Carolina is not in isolation. “I’m glad to see larger communities of activists working on environmental problems,” says John. “And as the numbers of people who make a personal effort to support buying local grow, the whole movement will grow. If enough people are involved with something, they can really create a big change.” And as a member of this movement, and having been very successful in it, he says: “I’m just happy to be a part of it.”

Madison County Public Schools: Another Link in the Chain

Brenda Spence, Child Nutrition Director for Madison County Schools, started buying locally-grown food fifteen years ago. It all started when a grower who had a hydroponic lettuce operation appeared in her office with lettuce in one hand and flowers in the other. He was growing for the Asheville restaurant market, had overproduced, and was trying to get rid of the rest of his lettuce. So she bought the lettuce for the schools – because, as she says, “How can you refuse a man with flowers in his hand?”

Beginning to buy local was, for Brenda, a choice that was important to her personally. Since that time, she’s found that the Madison County school board has been eager to get local food into the schools, too. The reason that the school board is behind the idea is the same, Brenda says, as the reason that she initially wanted to support the growers in her community: “It’s seeing your neighbors suffer. Suddenly tobacco farmers in your community don’t have any way to make a living, and then anything you can do to help them, and then also to help their children that are in school, is just a humanitarian thing to do.”

The Farm to School program at Madison County Schools has come a long way since the days when Brenda bought leftovers from farmers that walked into her office. In the last three years, Brenda has wrought a close relationship with Dewain Mackey of Madison Farms, an organized group of Madison County farmers that can provide her with food grown inside the county throughout the entire school year. Before the growing season even began, she planned with Dewain to purchase cabbage, sweet potatoes, apples, potatoes, and beef for the school system. Working personally with Dewain has made it possible for her to coordinate purchasing of an increasing amount of local food. “In the early days I bought from individual farmers, and it was really sporadic,” she explains. “Working with Dewain has definitely made it possible for me to buy more local food.” In the first four months of the 2006-2007 school year, already \$12,343.70 had been spent on locally-grown produce, representing a growing proportion of the \$500,000 budget for food that the school system operates on.

Another one of her first ventures into buying local was when a grower came into Brenda’s office with 200 watermelons, needing to get rid of them that day. Brenda’s staff in the cafeteria wasn’t very pleased when she bought them, because they all had to store 50 apiece. “That’s the problem,” Brenda laughs: “farmers want to get rid of their product, get a check and be done with it all in one day. Most of the time it’s just not feasible.”

It was difficult for Brenda to deal with individual farmers by herself, since she is the only staff person in the Child Nutrition Office that handles the work of the entire county school system. “If I had to deal with every individual farmer that I buy from, I probably wouldn’t be able to do it at all,” Brenda says. Working with an established group of farmers makes it possible to plan the school system’s purchases ahead of time, for delivery to be coordinated and consolidated, and for the farmers to provide quantities of food that more nearly approach the scale of the schools system’s food purchases.

There are six schools in the system and 2622 total students, and it’s important that menu items be the same for all the schools. Finding enough locally-grown food to supply the entire system is

always a difficult issue. “What seems like a lot of produce for someone growing it at home is really not a lot if you have that many students to feed,” says Brenda. “We just killed a beef cow for the school, and Dewain asked me, ‘How do you want this delivered?’” “All at once!” Brenda replied, “this won’t be but one menu’s worth!”

Being creative with the products that she buys locally has helped Brenda to use the products that are available. Since she’s able to plan with Dewain what the Madison Farms’ growers will supply, she can request products that are harvested during the school year or that require less labor to prepare. Then, in addition to the amount that she plans to buy from Madison Farms, she can purchase other products that the farmers grow for other markets, such as squash, tomatoes, and peppers, as availability allows.

With a large quantity of any one thing, it is sometimes difficult to find a way to store or manage it. Dewain had once received a large harvest of sweet potatoes from the Madison Farms’ farmers, and some of the them were up to five pounds each. He asked Brenda what she thought he should do with the potatoes before bringing them to the school. She told him frankly: “I suggest you cut them up, peel them, cook them, mash them, and put them in five-pound bags, because that’s how we’re used to receiving them.” To explain, she added, “If you think about it, school breakfast is over at 8 o’clock. Then you have until 10:30 to get lunch ready. So that’s only two and a half hours that you have to get the meal ready, and with that amount of time you just can’t have a lot of dirt to wash off or a lot of peeling to do. It has to be ready.”

It was important to have the support of her staff in processing the locally-grown food as it sometimes requires extra work, or at least different work, than they were used to doing. Initially the cafeteria staff was reluctant to accept the idea, but now, according to Brenda, “My staff is right there beside me on the rollercoaster ride of local food.”

As far as the reaction from the students, Brenda says, “It’s basically school food no matter what you have. They’re not up in arms protesting to get more of it, I’ll tell you that!” The salad bar at the high school has been an unexpected success though, especially the fresh squash and broccoli – which, Brenda notes, “you wouldn’t think high schoolers would like, but they really do!” Depending on what is available from the local growers, the cafeteria workers make a presentation of fresh tomatoes, squash, carrots and celery sticks that have been a hit with the students. “Our local food that we get is very low in sodium, which is something that we have to think about a lot. And it’s also low in fat, so that’s really good for the students.”

In order to make delivery work for all of the farmers that she buys from, Brenda and Dewain have enlisted the help of the driver that delivers the USDA commodity products to the school. The Madison Farms’ growers bring the products from their individual farms to a central location in the county, and the driver picks them up on his way to deliver to the schools.

Overall, Brenda has found that it’s important to stay flexible, to take advantage of the produce that’s available and able to be used, and to continue to remind her staff and other school personnel about why buying local food is important. She makes a point to label the locally-grown produce that’s offered in the schools by marking it “Madison Farms Broccoli,” or “Madison Farms Sweet Potatoes”, for example, on the menu that is posted on the Madison

County Schools website. “The farmers like to see that there, and the parents like to see it too,” she says.

Working with Dewain and Madison Farms has made the largest impact in her local buying, Brenda says. “I’m really all about Madison County. I deal with Madison Farms because it’s organized and it’s easier, but also because I’m thinking mostly about this county.” The local food movement in western North Carolina is great, says Brenda, but she doesn’t feel that it concerns her very much. For her, buying locally is personally important, but it is also a phenomenon that she is only a part of: it’s a long chain of commitment and work that stretches from the coordination of the farmers to the new work of the cafeteria workers. “I think Dewain was really the one that convinced the school board to start buying from local farmers, and the school board told me that they wanted me to do that, and I’m just the one that made it happen.”

Freeman's Farm: Growing Trust in the Fields

“This is what we call the upland.” Calvin Freeman stretches his arm out toward an expanse of red clay fields that curve and hug the contours of the hills. “This is where I grow most of my greens. Down at the bottomland, that’s where the sweet corn and the squash and the watermelons are grown. And the okra, can’t forget the okra.” The bottomland is a rich stretch of flat land located on Freemantown Road. The bottomland is parallel to a creek edged with mixed hardwoods and river birch. In summer, the hills green and the rows fill with dozens of varieties of vegetables and melons.

These fields in Rutherford County are where Calvin Freeman has been growing market vegetables for most of his life. As a teenager, he would work with his twin brother to help his father and mother in the fields and at market. “This is a family farm. And the farming has been handed down. I love it.”

Calvin has become known as a farmer that will produce a beautiful product of consistent quality. At his main market venues, the Marion flea market and the Rutherford County farmers’ market, customers return week after week to seek out his produce. They even call him at home to find out what he has to offer that week, or to request a specific vegetable or variety. “I try to grow what people want,” says Calvin. “They tell me what they want to buy and I keep track of what sells at the market. And I’m always trying something new, using different seeds every season.”

Calvin set up a small fruit and vegetable stand on the road by his upland fields where he can sell produce in the summer to customers who pass by on the road or who come expressly to buy what’s freshest from the fields. He has also moved his packing station to a spot under a shade tree within view of the road and has found that people traveling by will often stop and ask to buy some of what he’s packing or washing. “People know to come here for good vegetables through word of mouth, and by knowing me. They know this is what I do.”

His constant drive to improve and innovate, along with his dedication to consistent quality, has also helped Calvin develop a strong relationship with Mountain Food Products, an Asheville-based distributor that is one of his “biggest and best” buyers year-round. “My father was selling to Ron Ainspan at Mountain Foods before I took over farming from him, so Ron knows both me and my family. Mountain Foods is a good buyer; I can always count on them.” But it is his customer base at the tailgate markets, those individuals that come to buy every week, that his business really rests on. “The markets are definitely where I sell most of my vegetables, and then people that I sell to at the market come here to the farm too.”

One of Calvin’s biggest assets, both in selling at the market and directly to Mountain Foods, is his attention to good packaging, which he learned from his father. Over the years he has learned for himself that produce that looks good, will sell. “My number one priority is high quality. And of course, to keep my produce looking good. Because if it’s pretty,” Calvin laughs, “it’ll sell.” Keeping his vegetables looking good means taking care of them in the field and through the packing process, grading them carefully, and ensuring that quality is consistent through each container. “I’ve been marketing produce since I was a teenager, you know. When I was a kid I would go with my dad to the market on Lexington Avenue in Asheville and help him sell our

vegetables there. I learned how to market vegetables back then, and every year I find something to do better.”

Calvin’s area of Rutherford County, the Bill’s Creek area, is known as the best in the county for growing vegetables. As Calvin explains, “People will ask me, ‘Are you from Bill’s Creek? Are these vegetables from Bill’s Creek?’” Unfortunately, Bill’s Creek’s rolling hills and proximity to Lake Lure also make it one of the fastest-growing areas in the county. Calvin is one of only a very few full-time growers left in the area, and his fields are becoming neighbor to more and more housing developments.

With his on-farm experience and presence at the markets, Calvin has made his produce available to the new vacationers. With his warm personality and dedication to providing consistently high quality produce, he has gained the trust of both longtime community members and new residents. Like the summertime visitors that all too often return to Bill’s Creek to become locals, his drop-in customers soon become devoted regulars. It is those customers that return to the market week after week that Calvin grows for. In exchange for their loyalty through the market season and even over the many years that he’s been farming, Calvin provides the market buyers with delicious fruits and vegetables and with a promise of quality that he crafts and delivers himself.

Shelton Farms: Finding a Space in the Middle of Agriculture

When William Shelton was still in college, he would plant a few rows of corn on his father's land to sell to the local supermarkets. On summer mornings he would harvest a few hundred dozen ears of the sweet corn before dawn. He would drive the corn himself to the local Ingles market, itself part of a regionally-based grocery chain. He would receive a check for the corn on the spot, and by that afternoon he would get a call asking if he had any more fresh corn to sell. The arrangement was simple; the corn was fresh; and the price was fair.

A few years later, after William had returned to his family farm to farm full-time, he found he could still sell nearly everything he grew to a local Ingles store. "I could walk into an individual store and deal directly with that store's produce manager," William remembers. "On top of that, I was distributing my products myself to public schools in three counties. I can't imagine doing all of that at the size I'm at now."

Two years after he took over the Shelton Farms operation, William built two greenhouses to devote to bibb lettuce, a specialty lettuce that requires careful care in raising and handling and that brings a premium price. Within two years, William built two more, and then four more greenhouse bays. With that much of an increase in his production, and because his product was a specialty, William found that the small, decentralized markets that he had been relying on to take his product were no longer enough. What's more, he had too much produce to distribute it himself. "I outgrew myself," William says. "It took a few years to catch up to the size that I had established."

The predicament that William found himself in, where his production was too large to be met solely by demand in local markets, but too small to compete with national commodity producers, is a common one faced by many mid-sized farms. While smaller farms can find niche markets selling directly to consumers or making their own deliveries to a few local market outlets, it's not feasible for a farm the size of William Shelton's to deal in direct markets or to make deliveries to local retail sites independently. At the same time, Shelton Farms is not at the industrial scale that is required to compete at commodity prices. "With so much volume, I underpriced myself at first trying to just break into the market," William explains. "It took a while to find a balance between supply and demand."

In this respect, Shelton Farms struggles with the same issues of scale as mid-sized farms all over the country. These farms fit awkwardly between the two marketing strategies that are available to growers today: large-scale commodity markets, where mass quantities of single crops are required and prices are low; and direct markets, where small quantities of differentiated products can be sold at a premium price, but distribution is costly. A prevailing "widening of the gap" in national agriculture over the last few decades has brought increasing consolidation of huge megafarms alongside expanding opportunities for small farms adapted to direct markets. Nationwide, the percentage of farms with gross sales of less than \$2,500 and that of those with gross sales in excess of \$500,000 both showed increases between 1997 and 2002, while the percentage of farms with sales between \$2,500 and \$500,000 dramatically decreased in the same time period¹. These farms, and their plight in the face of incompatible infrastructure and

¹ *Farms, Land in Farms, and Livestock Operations: 2005 Summary*. 2006. National Agricultural Statistics Service.

marketing support, are the subject of a national initiative that calls them the “Agriculture of the Middle”.

The farms that constitute the Agriculture of the Middle in the US represent more than 80% of the nation’s farmland². In western North Carolina, where farms have historically occupied small tracts of the mountain land, even the region’s largest farms fall between the \$2,500 and \$500,000 sales marks. When any of these mid-sized farms are lost, a significant portion of the region’s capacity for food production and a substantial amount of its land in farming are also lost. Their infrastructure and marketing needs present a unique challenge to local networks.

With eight greenhouses in full hydroponic lettuce production, Shelton Farms produces roughly 10,000 to 12,000 heads of bibb lettuce per week. “My dilemma,” William says, “is that to make any money I have to deal in some kind of volume. But in order to move that product in local markets, I would have to work to death to distribute it all.” With the smaller farm William used to be able to supply public schools with lettuce directly. Although he would love to be able to do it again, William explains, “Now there is not enough of a market for that lettuce in Jackson, Swain and Macon Counties combined.”

Finding a balance between supply and demand has also meant finding a balance between distributing his product himself, and simply handing it over to produce brokers and distributors to do that work for him. Either way, some profitability is compromised. On one hand, it is prohibitively expensive in time and transportation to market that volume of lettuce directly to consumers at the number of outlets that would be required. On the other, any broker or distributor that William hires to take care of that job will take a percentage of the price of the produce, and sometimes quite a substantial one. Today, William employs a complex and dynamic combination of those two methods to get his premium lettuce from the farm to the customer.

Shelton Farms bibb lettuce is sold at Ingles, Publix, Food Lion, Kroger, and Earth Fare stores all over the Southeast. To get there, the lettuce usually makes at least one stop along the way from the farm to the store. William contracts with a regionally-based distributor, Mountain Food Products, and with another fairly large-scale farm in western North Carolina to move the lettuce to larger distributors based in Atlanta or to deliver directly to the supermarket warehouses.

To get to Publix stores, for example, William delivers the lettuce to Mountain Food Products’ base in Asheville. Mountain Food Products then hauls it to the Atlanta Farmers’ Market, where it is picked up by another distributor and trucked to the stores. William has also worked out deliveries via backhauling, a practice where an empty truck that has made its delivery to an Ingles store, for example, can pick up produce at the store to take back to the Ingles warehouse for distribution. It is a clever system, since the truck is making the return trip to the warehouse anyway, but it requires considerable negotiation and planning. Currently, William’s lettuce is backhauled from the local Ingles store in Bryson City to the Ingles warehouse in Black Mountain, where it is then distributed to Ingles stores all over the Southeast.

² Agriculture of the Middle: <http://www.agofthemiddle.org/>

“I can’t go in and sell directly to the produce manager of an individual Ingles store anymore,” says William, “but I still have a very good relationship with them. Because I’ve provided Ingles with a consistent, high-quality product for years, I’ve earned their trust. I sell to the Ingles warehouse year-round, and they take pretty much whatever I have available. In season I send them yellow crookneck squash, half runners and peppers along with my lettuce.” William has also been working with Mountain Food Products for years and has established a solid relationship with that company. Even with the larger quantities that Shelton Farms deals in, for William produce marketing is still founded on good relationships.

William has also found that packaging is very important in dealing with large-volume buyers. He has adapted his packaging standards and presentation of the product to the requirements of each grocery store, such as choosing to leave the roots on the lettuce or take them off, to provide adult lettuce or baby, or to use different labels. “When I approach a buyer,” says William, “I have to go in with an attitude of, ‘How do you need the product?’, and ‘Would this better for you?’, and ‘What do you need?’.”

Another important ingredient in the balance that William has worked out for his mid-sized farm is the fact that he supplies a specialty product. “Having a differentiated product is part of what has helped me to secure Ingles as a customer,” William explains. And William relies on this same higher-value advantage in marketing his tomato crop, which represents a share of the farm sales nearly equal to the lettuce. Shelton Farms tomatoes go almost exclusively to a distributor in New York City with a highly developed brand name, Lucky’s Real Tomatoes®. The Lucky’s brand is built on the superior flavor of vine-ripened tomatoes and has become popular with corporate chefs all over the country. After traveling from western North Carolina to New York City, William’s tomatoes are then shipped to upscale restaurants as far away as Las Vegas and as close by as Charlotte. “It’s all about name recognition and selling the flavor,” says William. “These chefs have just got to have a Lucky’s tomato. And it’s a good relationship for me because I get a premium price.” And although he acknowledges the irony and lack of efficiency in a system that sends fresh, “real” tomatoes so far afield only to return them back to the state where they were grown, William says with a laugh, “That’s the produce business.”

Specialty markets such as that for Lucky’s Real Tomatoes are one suggested solution to the needs of the nation’s mid-sized farms. The products that fit this niche must be high-quality and differentiated, and they can bring a higher price for these qualities. At the same time, some of these products are needed in higher quantity than can be supplied by direct-market growers. It is this combination of attributes that makes the growing market for these unique products promising to farms of intermediate scale.

William has recently been sworn in as a county commissioner of Jackson County. He is strongly committed to his home region and to its economic and environmental sustainability. But, in order to be a full-time farmer, he has had to make compromises. His position at the middle scale of agriculture, poised between the high returns of specialty markets and the large volumes of commodity markets, has forced him to find his own balance in the center. As William puts it, “I probably could find someone to distribute all of my produce and just take care of it all, but then I would end up giving away some of the profitability by not marketing it myself. And I might get

a higher return if I dealt directly with local markets, but after adding in transportation costs it would be just about even. I have to just do as much as I can.”

The local food movement in western North Carolina, which has been focused primarily on small-scale farmers and direct markets, is encouraging to William. “I enjoy the recognition I get as a farmer,” he says. “People say, ‘Wow, you’re really doing it out here!’, and I appreciate the excitement and the awareness that people have about local farms. But a lot of people still don’t really know what it takes to grow food and make a living at it.” As far as William’s sales, the excitement over local food probably hasn’t had very much impact on his business. As he says, “The people that come out here looking to buy a few tomatoes can’t support my farm alone.” For a farm like Shelton Farms, it takes support from a much larger system to be successful. Finding a way to secure that support in a way that is economically and environmentally sustainable is the challenge that faces William and the other farms in the Agriculture of the Middle.

Mountain Food Products: Serving the Local Community

Western North Carolina has always been a place that produces creative entrepreneurs. When Ron Ainspan moved to the area in the late 1970s to begin growing vegetables in Swannanoa, he became part of a small community of Asheville residents who were interested in marketing locally produced food to local retailers. “Some of us were baking bread, some of us were making tofu, some of us were doing sprouts. And I was farming.” Each of these small businesses were attempting to distribute their own products, and finding that distribution was more difficult than they had expected. “Distribution is hard,” Ron explains. “We found that it was expensive and time consuming. And too, we were all distributing our products to pretty much the same retailers, mostly restaurants and some grocery stores.” At the end of the growing season, Ron needed work to do; so he thought, “Why don’t I do the distribution for all of us?” So, in 1985, Mountain Food Products was born.

From the very beginning, the driving force for Ron’s distribution business was to deliver locally produced foods to local businesses. After several of his customers asked him to make a trip to the Dekalb Farmers’ Market in Atlanta to pick up exotic fruits and vegetables, he began to expand from the few baked and processed goods he was distributing to work more and more with produce. He found that it paired well with his own vegetable growing and that there was an open market for a local distributor in Asheville.

Because of his ties to the local farming community and the regional genesis of Mountain Food Products, Ron strives to make the business as locally-focused as possible. As Ron explains, “It took a while for the growing community to get to a size and state where I could make local purchasing a priority. Around 1995, the local idea really took off. And since then, the appeal of local food has really grown.” Due to a combination of factors, which Ron identifies as increased awareness of local food and the influence of ASAP’s Local Food Campaign, he found that there were more and more buyers looking for locally-grown food and more producers growing for local markets.

The expanding markets for local products and the increasing numbers of local producers are encouraging trends to Ron, but he finds that he is caught in a difficult position as both a buyer and a provider. In order to be a seller of integrity he has to supply his customers with a year-round supply of produce of consistent quality and appearance. As Ron explains, he knows his customers well. “I know what each one requires for ripeness, size, firmness, everything. And I have to be able to deliver that to them every month of the year.” When local products are in season and available for Ron to purchase, they must fit seamlessly with the standards that are established by other, year-round suppliers.

“What I would really like to do is to be able to buy from individual farmers directly,” Ron says. “I’d like to know that I’m buying directly from the farmer that grew that crop. But it’s all a balance between following values that are acceptable to me, buying local when I can, and not being too rigid.” For instance, some of the farmers that Ron buys from are produce brokers as well. They work with a network of growers and know the standards that he requires like ripeness, fullness of each case, usability, and color. They are able to supply him with consistency in grading and packaging though some of their products are not grown locally. On

the other hand, Ron makes exceptions where he can to work directly with growers. “I’ll develop a relationship with an individual farmer and buy what he has to sell me, but it’s much more practical to work with a broker.”

The kind of individualized service that Ron is able to provide to his buyers is a strength of his company’s small size and local focus. Choosing to remain small in scale and to supply mostly other independently-run small restaurant businesses means that Ron’s relationships with his customers are close and longstanding. Many of his customers are loyal to Ron and maintain close communication with his staff about their produce needs for each week.

Ron and ASAP have recently begun to take advantage of this close communication and its implications for local growers. Because Ron maintains careful records of where each load of produce coming onto his loading dock has come from, he is able to pass that information on to his customers and let them know exactly where their purchases were grown. The *Appalachian Grown*[™] program initiated by ASAP, where locally-grown products are certified and marked with a recognizable logo, maintains the recognizable identification of locally-grown produce all the way from the farm, through Ron’s distribution, to the restaurant and consumer. Mountain Food Products provides a separate availability sheet to each buyer during the local growing season to highlight local offerings that are available that week. This simple exchange of information, built on relationships that Ron has already cultivated with his customers over the 22 years that he’s been in business, provides a powerful link in the expansion of demand for local products. With secure knowledge of what products are local, Ron’s customers and their diners can make a choice to support local farmers.

Ron passes on confidence to his customers by checking on every load that arrives at Mountain Food Products. This gives him a credibility in making local offerings that is appreciated, he says. “Some of my customers appreciate the fact that it’s local more than others,” says Ron. “Especially those independent restaurants that are in a position to promote their local buying. More than that, though, knowing where the load came from lets me be honest to myself and my own values.”

Although he runs his business as much in line with his own values as possible, Ron sees Mountain Food Products as very much a part, rather than an alternative to, the larger food system. “I focus my business differently and give emphasis to local products because I care about that personally. But I wouldn’t say that my business is an alternative method of distribution at all.” Despite repeated opportunities to expand to wider production and receiving networks, Ron has chosen to keep his radius of distribution close to home. “I started this business to serve *this* community,” he says. “I’m not interested in expanding.” It is this small-scale, local focus that makes it possible for Mountain Food Products to capitalize on local offerings when they are available.

Ron is receiving help with some of the other challenges in obtaining and distributing local produce by a larger movement in western North Carolina. Through the years, Ron has seen the local community become more and more enthusiastic about supporting local growers and producers, a value that has motivated him from the beginning. Although he is committed to supporting local growers on a personal level, as he puts it, “You must be in a time and place

where what you're doing is of importance to your customers." Because local food is of importance to many of his customers, he is supported in buying locally. And although he doesn't imagine that most people in the Asheville area will change their eating habits to completely reflect the local growing season anytime soon, he is optimistic about the strength of the local food movement in western North Carolina. "It's been very satisfying to be a part of the movement," he says. "I think it'll only keep growing stronger."

Cane Creek Valley Farm: Catching up to Stay in Place

At the end of her first season as a full-time farmer, Amanda Sizemore barely has time to stop and talk. “I never stop going, I’m always running around like a chicken with my head cut off! On this farm, I’m really just trying to keep up with my dad.” She is obviously exhilarated. She seems to almost jump out of her seat with visible excitement.

Amanda is the fourth generation of her family to work the land of Cane Creek Valley Farm in Fletcher, North Carolina, but the very first to market organic produce. In her first season on the farm, she managed fifteen certified organic gardens and the small produce stand where the products of the garden were sold to passersby on busy Cane Creek Valley Road. It didn’t take her long to realize that her fifteen gardens were producing way too much volume to be sold at the small farm stand; so in the same season, she began marketing her organic vegetables to half a dozen outlets on the wholesale market. At the end of the season, she says, “I realized I had just no idea how much there was to it!”

Amanda shares responsibility for this brand-new operation with her father, George Nesbitt, who grew up working the family dairy on the farm and who still maintains one of the largest dairies in WNC on the property. Like most other dairies operated in North Carolina, the Nesbitt family dairy is facing rapidly mounting financial pressures from the milk market and from regional development. As the land around the dairy has been sold piece by piece to homesite developers, less and less of it is available for Mr. Nesbitt to lease in addition to the 100 acres that he owns. Profit margins for the small family dairy are decreasing drastically in a global market for commodity milk. And so two years ago, Amanda and her dad started looking for alternative ways to continue the farm. “We just love farming, and we want to keep the farm going. We were looking for the best way to be able to do that.”

Amanda had just graduated with a [Master’s?] degree in Horticulture, and she and her father investigated every available crop that could be grown on the farm to maximize returns and make the family land profitable again. “We looked at it all, cut flowers, nursery crops, you name it,” Amanda says. “Then we went to a workshop on small-scale organic production, and we thought, ‘Hey, there might be a future in this one.’”

As they embarked on their transition from one highly specialized market to another, Amanda and her father faced some challenges that are unique to dairy farms, and some common to most small farms in western North Carolina. Because of the significant on-farm equipment that is required of them, such as milking parlors and facilities for animal care, dairy farmers must make a large financial investment just to operate. This makes it more difficult for dairy farmers to switch from one kind of production to another; unlike crop farmers, who may only have to change a few pieces of equipment to grow one crop instead of another, dairy farmers must make drastic changes to their farm to cross from dairy into another kind of production.

Amanda and her father also had relatively small amounts of acreage to work with, and lacked the infrastructure for processing of vegetable products or for distribution to distant markets. Although declining profits in the dairy business and encroaching development of nearby land made it clear to both of them that some sort of transition would be necessary to keep the family

farm in business, the choice of what kind of transition to make was treacherous. Amanda knew that she had to be careful in choosing the market to enter, and that that choice would rest primarily on finding willing buyers. She also wanted to choose a new method of production that would build on the assets that the farm already had.

Amanda and her father decided that there was a future in organic production primarily because there appeared to be a ready and vibrant market for it. There were also some advantages inherent in the structure of the family farm and its history as a dairy that made the transition to organic vegetable production easier than it might have otherwise been. “Because this bottomland had only ever been in pasture, we had never put any chemicals on it at all,” Amanda explains. “So to get it certified organic, instead of going through the three-year process, it only took us a year.” And because the dairy is adjacent to the organic cropland, 90% of the gardens’ fertilizer needs are met by spreading manure from the cows. “That cuts down on our input costs tremendously, which is a big downside of farming organically. This way, our returns are much higher.”

But although the integration of the vegetable gardens with the family dairy has proved an asset to production, the most difficult part of the operation has been not the growing, but the marketing of the vegetables. Although demand for local produce and certified organic products appeared to be high, the challenge of finding and entering that market in western North Carolina outlets still remained. As Amanda explains, “Farming is really all about paying attention to markets, changing and evolving with them. And that’s the hardest thing for us now – we can grow anything! But can we sell it?”

Amanda’s original plan for marketing her certified organic vegetables was through the on-farm produce stand, which she set up to be the main outlet for her organic gardens but also for other local producers. “I love the idea of farms in a community, supporting the community. I wanted to make our stand a hub for the local growing community.” She brought in local jams, dairy products, baskets and other crafts, and local produce that she wasn’t growing on the farm. And although she expected to pull in customers locally because of the certified organic produce that she was able to offer, she found that it was the freshness of the produce that appealed to the farm stand customers instead. “People were just happy to have fresh produce,” she explains. “And we had some loyal customers, but not enough customers to buy everything that we were producing.”

And so not far into her first season of growing, Amanda approached grocery store buyers, larger markets that responded with the enthusiasm that she expected for certified organic produce. “I received a lot of help from one person at the first Earth Fare store that I went to,” she says. “And buyers at the other stores that I talked to were excited to be able to get organic produce that was also local.” Some of the stores that she began to deal with had been discouraged from selling organic produce because it wouldn’t last on the shelves; they found that in the time that passed before it was sold, the produce quality would deteriorate until it didn’t merit the higher price usually charged for organics. “I told them they wouldn’t have that problem with our produce,” says Amanda. “Because ours is picked and shipped that same day. And it doesn’t go far.”

To facilitate distribution to the outlets that were enthusiastic about certified organic produce, Amanda began selling to three produce brokers and directly to three more large-scale retailers.

By backhauling from local stores to central warehouses and distributing some of the farm produce herself, Amanda is able to get Cane Creek Valley Farm produce to a variety of different buyers. “I wish that I could sell more directly,” she says, “But I just don’t have the time or the resources to be peddling vegetables all over the place. The money really comes from the wholesale market, and that’s where I have to put my energy now.”

Fortunately, it’s not just Amanda’s energy that is being put into the new venture. She is the oldest of nine children in a family that is still very much centered around the farm. “My father and I wanted to make it so that all of my siblings could get involved in some way,” says Amanda. “We incorporated so that anyone from the family who had an idea for their own business on the farm could buy a share and run that part themselves.” One of her brothers-in-law has a plan to start organic blueberry cultivation; another sister, an education major in college, is interested in returning to the farm and integrating it with elementary school curricula. “Almost all of my brothers and sisters came out and worked in the fields with us last season,” Amanda laughs. “They all just wanted to be out there. It’s fun for us to be working on the farm together.” Two of her younger brothers, high school students, charmed customers at the produce stand. Amanda’s own children, aged 2 and 9, are homeschooled on the farm so that they too can be involved. “My dad grew up on the farm; my siblings and I grew up on the farm. I want my children to learn how to work on the farm and have that experience.”

Providing a place for everyone in the family to participate on the farm is at the very heart of the new operation. “That’s why we’re doing all of this – to be on the farm.” Amanda hopes that in the next year, organic certification will be extended to an additional twenty acres, and possibly to sixty acres of the dairy eventually. “It’s fun!” Amanda laughs. “I want it to keep working!”

APPENDIX C: A Review of ASAP's Local Food Campaign

The Local Food Campaign is the main strategic component used by the Appalachian Sustainable Agriculture Project (ASAP) to promote local consumption of local farm products in Western North Carolina (WNC). ASAP's overall mission is to create and expand regional community based and integrated food systems that are locally owned and controlled, environmentally sound, economically viable, and health-promoting. The organization's vision is a future food system throughout the mountains of North Carolina and the Southern Appalachians that:

- provides a safe and nutritious food supply for all segments of society;
- is produced, marketed, and distributed in a manner that enhances human and environmental health; and
- adds economic and social value to rural and urban communities.

In working toward those goals, the major activities of ASAP's Local Food Campaign involve public education and promotional work; farmer training and support; focused farm-to-school programming; the *Appalachian Grown*TM labeling program; and publishing and distributing the *Local Food Guide*, a guide to food and farms in the region.

This Appendix provides a review of what services have been delivered and what work has been done as part of ASAP's Local Food Campaign since it began in 2000. Where possible, successes of the Campaign are highlighted, as are changes in each category of Campaign activity. Special attention is given to reviewing the effectiveness of the *Local Food Guide*, which is the main method ASAP has used to promote local food and farms in the region.

The Local Food Guide

The *Local Food Guide* ("the Guide") is a comprehensive guide to food and farms in WNC. The Guide was first published in 2002 and a new edition is published each year. Approximately 250,000 copies of the Guide have been printed in five years, distributed twice a month through area visitor and welcome centers, as well as through local restaurants, grocers, and the Asheville Regional Airport. An online version of the Guide was developed in 2002. In the first year, more than 7,500 visits to the online guide were documented. The number of visits has nearly doubled each year since, peaking at 90,000 in 2006.

Consistent growth in the number of farms and businesses listed in the Guide is one measure of its effectiveness (see Table 1, next page). Various stakeholder groups have also commented on the usefulness of the guide. In a 2003 survey of 61 Tailgate Market vendors, more than half reported that the Local Food Guide had increased demand for their products. Forty-two percent of CSA farms listed in the Guide in 2004 acknowledged that the Guide had contributed to their program's success. Those CSA programs described the value of the Guide in raising awareness about local food in general and educating the public on the CSA model in particular.

	Number of Copies Distributed	Farm Listings	Restaurant Listings	Retail Listings	Bed & Breakfast Listings	Caterer and Baker Listings	Distributor and Processor Listings
2002	15,000	58	23	11	1	4	--
2003	28,000	127	25	14	7	6	--
2004	60,000	144	29	11	9	7	5
2005	60,000	167	26	13	10	8	6
2006	81,000	182	32	18	11	11	10

Familiarity with and use of the Guide has been measured through various consumer and organizational surveys conducted by ASAP between 2003 and 2006:

- Nearly two thirds of tailgate market shoppers in Asheville, Buncombe, and Madison Counties during the summers of 2003 and 2004 reported being familiar with the Guide, and more than half of those reported that they had used the Guide to find local food or farms.¹
- In a 2004 survey of 300 randomly selected consumers in Buncombe, Madison and Henderson counties, 13 percent of consumers reported being familiar with the Guide. Of those, about 40 percent reported that they had used the Guide to find local food or farms and two individuals reported that they had used the web version of the Guide.²
- In a 2006 survey of 75 shoppers at the WNC Farmers Market – one of five state-owned and operated farmers’ markets in NC – 28 percent of shoppers reported being familiar with the Guide. Of those, 38 percent reported that they had used the Guide to find local food or farms and two individuals reported that they had used the web version of the Guide.³

Those surveys show that awareness and use of the *Local Food Guide* is extremely high among shoppers with a preference for local food. While awareness is much lower among the population at-large, a significant number of residents are still familiar with the Guide. Despite its usefulness in linking people who are interested in buying locally-grown food to sources for locally-grown food, the Guide should not be relied upon as the only method of raising public awareness about local food and farms in the region.

It also has limitations in its ability to serve larger scale buyers and producers of local food. Despite high interest in local food by more than half of 53 restaurant owners and summer camp

¹ *A Market Analysis of Tailgate Farmers Markets of Buncombe and Madison Counties*. 2005. Center for Assessment and Research Alliances, Mars Hill College.

² *Locally Grown Foods Strategic Positioning Research*. 2004. Research Inc: Atlanta, GA.

³ *A Survey of Shoppers at the WNC Farmers Market*. 2007. Appalachian Sustainable Agriculture Project.

directors contacted as part of an organizational food purchasing survey, only two respondents reported being familiar with the Guide.⁴

In looking for ways to improve the Guide and its effectiveness, ASAP asked for input from farmers as well as tourism professionals and Agriculture Specialists from NC Cooperative Extension. Those suggestions are listed in Table 2 below.

Table 2: Suggestions for Improving the <i>Local Food Guide</i>
From tourism professionals:
Make the cover more enticing to a traveler.
Indicate that it represents more ways for people to interact with farm community.
More streamlined version for visitors.
Be more comprehensive and keep a supply available.
From NC Cooperative Extension agents:
Educate buyers (restaurants, grocers, brokers) about the purpose of the Guide and how to use it.
Color code three-county clusters (ie. Polk-Rutherford-Henderson have a green tab; Buncombe-Haywood-Madison have a red tab; etc.)
Expand listings of the county's farmer operations, value added, etc.
From tailgate market vendors:
Add educational articles and more information about locally-grown food (2)
Increase circulation and distribution (2)
Formatting suggestions
Better publicity about the Guide

Overall, the great majority of tourism professionals, NC Cooperative Extension agents, and tailgate market vendors – when asked to make suggestions about improving the Guide – either did not offer any suggestions or said “none,” “nothing,” or made a similar comment indicating their satisfaction with the Guide.

Outreach to organizational buyers

While ASAP’s Local Food Campaign began with an emphasis on facilitating direct sales of locally-grown food and farm products to consumers in the region, programming quickly expanded to include larger scale markets like restaurants, food stores, and institutions that serve or sell food. In 2006, two new initiatives geared toward larger markets were introduced:

- The *Mixing Bowl*, a directory of food producers and restaurant chefs in the southern Appalachian region, is intended to link interested growers with restaurants interested in buying locally-grown food. The *Mixing Bowl* was first published in 2006 and is available in both print and online versions.

⁴ Data from 19 summer camps and 34 randomly selected restaurants in WNC that were not already involved with ASAP’s Local Food Campaign.

- The *Farm Outreach Specialist* is a new staff position at ASAP designed to facilitate linkages between producers and buyers. To bridge the gap between high demand for local food and farmers looking for new markets, the Outreach Specialist works with buyers to ascertain delivery, insurance, volume, packaging, and insurance specifications and with individual farmers to assess their current and potential capabilities and introduce them to appropriate markets.

What is Appalachian Grown™?

Partly in response to new information about the importance of labeling, ASAP began working in 2005 to develop a label for food and farm products produced in Appalachian counties. The label, called *Appalachian Grown™*, was introduced in 2006 and is now being used by farms in the region to identify their products as locally-grown. Since the logo was introduced in May 2006, close to 100 farms have been certified. Promotional materials and road signs are provided to farms that become Appalachian Grown certified and to retailers of food and farm products that agree to abide by a set of logo use standards.



Public Education and Promotional Work

- **asapconnections.org website.** ASAP maintains an extensive website which includes information about campaign activities and events. The site has a link to a second website, Growing-minds.org, which includes detailed information about its Farm-to-School program (see “Focused Farm-to-School programming” below). Use of the asapconnections.org website has increased tremendously during the years of the Campaign’s operation. Compared to 17,111 visits to the website in 2002, a total of 75,000 visits were documented in 2006.
- **ASAP listserv.** The ASAP listserv provides a forum to subscribers to post information about upcoming food and agricultural related events and to discuss regional and national food issues. There are currently 437 members on the listserv. Registration on the ASAP listserv is available through the asapconnections.org website.
- **Appalachian Grown Logo.** The logo was developed by ASAP to certify food and agricultural products grown or raised by locally-owned and operated farms in WNC and the southern Appalachian mountains. Since the logo was introduced in May 2006, 75 farms have been certified. Promotional materials are provided to farms that become Appalachian Grown certified and to retailers of food and farm products that agree to abide by a set of logo use standards.
- **Children-Centered Education.** Through farm field trips, school gardens and cooking demonstrations and classes, ASAP’s Farm-to-School program provides elementary school children with hands-on opportunities to learn about their agricultural heritage and where food comes from and how to prepare and eat healthy local foods (see “Focused Farm-to-School programming” below).

- **Farmer Profiles.** Farmer profiles are used in retail stores and in the Local Food Guide to highlight local growers.
- **Local Food – Thousands of Miles Fresher! bumper sticker.** Perhaps the Local Food Campaign’s most visible symbol, since 2003 over 30,000 bumper stickers have been printed.
- **Festivals, Events, Tastings.** In the promotion and support of local food and farms, ASAP regularly speaks to community groups, local organizations, and students and presents at regional and national conferences. The organization also participates in a number of local food events including the Buy Local Bash, which it co-sponsors with Greenlife Grocery, and hosts food tastings at grocery stores and farmers’ tailgate markets.
- **Media Outreach.** ASAP works closely with local media representatives to increase coverage of local food issues and events in WNC. To date, the work of ASAP has been highlighted over 30 times in regional newspapers.

Tailgate Market Promotion

In 2002, ASAP led efforts to establish the Mountain Area Tailgate Marketing Association (MTMA), an organization originally made up of nine vendor and farmer only markets in Buncombe and Madison Counties. The MTMA has developed marketing campaigns, logos, and professional signage to promote and develop an extensive network of tailgate markets in the region. The number of markets has increased to nearly three dozen throughout the 23 counties of WNC.

In 2005 ASAP began working with a small group of farmers to develop plans for a large, downtown producer only market in Asheville. ASAP has facilitated communication between farmers and city government and helped with the planning process for nearly two years. The Asheville City Market is scheduled to open in the Spring of 2008 and is expected to be a destination point for locals and visitors from throughout the region.

What is the Mountain Tailgate Market Association?

The Mountain Tailgate Market Association (MTMA) was formed in the spring of 2002 by a group of farmers representing ten tailgate markets in Buncombe and Madison counties. The markets varied in size and length of time in operation, but all were made up entirely of producer-vendors. The tailgate markets represented a promising outlet for the 150 small family farms that sold through them, in part due to low operating costs and also because of the opportunity to sell specialty crops direct to consumers at premium prices. Unfortunately the markets – made up sometimes of only a few growers – had few resources for promotion and advertising.

With assistance from ASAP, the MTMA was formed so that individual markets could share information with others, pool their resources, and use the resources to advertise themselves as a group. By-laws and membership rules were written, including for example that all member markets must lie within the two-county region (later expanded to four), and that all markets must be producer-only. The organizational

structure was designed so that each market would elect one representative to the MTMA, and each representative would have one vote in deciding matters such as fee structure for member markets, event creation, and promotion.

Grant funding was secured in the MTMA's first year. The funding was used to develop a logo, plan a Summer Celebration for all markets, and conduct surveys of tailgate market shoppers in order to determine their motivations for coming to the market. The Summer Celebration was advertised as a week-long event and brought many markets their biggest day of sales. Meetings of the MTMA, which occur four to five times a year, provide growers with opportunities to share information on direct marketing and learn from the experience of others. The MTMA's first grant came from the Sustainable Agriculture Research and Education (SARE) program of the USDA. Additional funding was provided by ASAP, with whom the MTMA has remained closely affiliated. In addition to grant funding, dues are collected from vendors in each of the markets to support promotion and event planning.

With the MTMA in place as both a collective marketing tool and a forum for informational exchange among peers, competition between markets for media coverage, customer awareness, and even for growers has eased. Rather than cutting the share of attention tailgate markets can receive into smaller individual portions, the MTMA makes it possible for the markets together to create more of the resources that all can benefit from. It also confirms that growers can work together peacefully and productively. This is a model that could be expanded throughout the region to achieve similar benefits in other counties.

What is the Asheville City Market?

In 2005 ASAP began working with a small group of farmers to develop plans for a producer-only market in downtown Asheville that could accommodate up to 100 vendors. This process began after the tailgate market surveys documented a high level of interest among vendors and customers in a large centrally located grower market in Asheville. ASAP has facilitated communication between farmers and city and county government and helped with the planning process for nearly two years. The Asheville City Market is scheduled to open in Spring of 2008 and is expected to be a destination point for locals and visitors from throughout the region.

Farmer Training and Support

ASAP conducts numerous workshops and trainings designed to provide tools and practical information to producers to help them grow for and sell to local markets. Some examples include Farm-to-School workshops exploring the viability of the Farm-to-School market, grant workshops to explore the most promising sources of aid and how to effectively apply, an annual Marketing Opportunities for Farmers Conference, which is the largest market-focused agriculture conference in the region, and other workshops for tailgate market managers, grass roots leaders, and teachers. ASAP also provides one-on-one business and market planning services to farmers as a way to help them evaluate new enterprises and new markets.

Focused Farm-to-School Programming

What started as a school garden program in 2002 has now grown into a farm to school program. ASAP's Growing Minds Farm to School program consists of four components:

- **Local food in schools.** The main goal of the farm to school program is to provide farmers a viable market in their community to sell produce, while supplying our schools with the freshest food possible.
- **Farm field trips.** This component of the program strives to rebuild a connection to where food comes from and who is growing food in our local communities.
- **Nutrition education.** The nutrition component of the farm to school program consists of cooking demonstrations and classes to help students learn to enjoy preparing and eating healthy fresh foods.
- **School gardens.** Students will eat what they grow. The school garden component is the link between healthy eating and reconnecting students with their agricultural heritage

Currently at least one of these four components is being implemented in Madison, Mitchell and Yancey County, and Asheville City Schools. Work with Henderson County Head Start will begin this year, with implementation of all four components. ASAP also offers teacher workshops. These workshops build capacity among teachers to sustain the program. A recent farm field trip workshop brought educators and farmers together to talk about making the farm field trip beneficial to both groups. ASAP staff present at national and regional conferences on the farm to school topic.

ASAP has just completed a three year initiative, Growing Minds – Healthy Bodies, with MANNA FoodBank and Children First of Buncombe County. With funding from the NC Health and Wellness Trust Fund, services were provided to children and families in WNC to address childhood obesity. This grant provided ASAP with funding for school gardens, organization and facilitation of a three-county farm to school committee, teacher workshops, cooking demos/classes and farm field trips.

ASAP was the regional lead agency for the south in a national farm to school network initiative. ASAP canvassed the south to find data on farm to school activity and worked with other regions of the country to develop a structure for a national farm to school network.

ASAP was recently awarded a SSARE R&E grant to explore the viability of farm to school as a market for farmers and how many farmers the market can sustain. ASAP is also currently engaged with the Council on Aging to bring locally-grown food to senior dining sites.

Research and Evaluation

Since launching the Local Food Campaign in 1999, ASAP has committed resources to conduct ongoing research to evaluate and strengthen the effectiveness of campaign activities. This continuous evaluation has included asking questions of farmers and other relevant stakeholder groups about how well various programs and services are working, for example: *how can the Local Food Guide be improved? what can ASAP do to make this workshop more useful?* It also involves gathering information from other local food organizations around the country about ways to expand and strengthen local food systems. Finally, it involves collecting and analyzing data from consumers, organizations, businesses, and farms in WNC about how to strengthen the local food system in the region where ASAP operates.

Collaboration with Local and Regional Organizations

During the course of the Local Food Campaign, ASAP has formed long-term strategic partnerships with specific organizations including North Carolina Cooperative Extension, MANNA Foodbank, Hand Made in America, as well as other organizations in the southern Appalachian region with a focus on food and farming issues. In the effort to support local farmers and rebuild a local food system that is beneficial to all segments of society, ASAP recognizes the importance of forming collaborative relationships across organizations to bring respective resources together and to strengthen the reach of campaign activities.

How is local food being featured in retail food stores in WNC?

Profiling the retail food stores that are members of ASAP's Local Food Campaign illustrates how local food can and is being featured in supermarkets and groceries in the region.

Earthfare is a chain of **full-service natural foods grocery** stores headquartered in Asheville and operating 13 stores in three southeastern states. Earthfare's mission focuses on offering organic and natural foods. Secondary to that, Earthfare strives to source local produce to the maximum extent possible. Earthfare's Asheville stores joined ASAP's Local Food Campaign in 2002 and typically offer more locally-grown food than other Earthfares, in part due to higher consumer demand in the area.

Greenlife Grocery operates two **full-service natural foods grocery** stores, one in Chattanooga, TN and the other in Asheville. The two stores are independently operated but both are guided by the company's philosophy of offering as many local and organic goods as possible. Greenlife has successfully worked with large and small growers for several years. Produce manager Rob Everett describes consumer demand for locally-grown food as high and he reports being frustrated by not being able to locate more local products on a regular basis.

Ingles Markets is a **large multi-store chain grocery** with operations in six southeastern states. Headquartered in Asheville, the company operates 197 supermarkets and sells approximately \$200 million of produce each year. In 2006, Ingles joined ASAP's Local Food Campaign, pledging to increase sales of locally-grown foods through its stores. This retailer offers tremendous potential for WNC growers because of the high volume involved, though packaging and delivery requirements will be more complex.

Fourteen **specialty food stores** are currently listed in ASAP's *Local Food Guide*. A specialty food store is one that specializes in one or two product lines, such as produce, meats, or baked goods, rather than offering a complete line of products. This category also includes ethnic groceries and co-ops. Currently, 90% of specialty food stores listed in the guide are in the five counties immediately surrounding Asheville though dozens of other specialty food stores operate in the remaining counties of WNC.

APPENDIX D: Related Research in Western North Carolina

At least four research projects in progress during this study period – and possibly several others – offer significant perspectives on some of the questions explored in this research. A brief description and/or results from each are included here.

1. The Farmland Values Project

The Farmland Values Project is a three-year initiative, led by economics professor Leah Greden Mathews of UNC-Asheville, to assess the non-agricultural values of farmland in Buncombe, Madison, Henderson, and Haywood counties. The project is funded by the "Agricultural Prosperity for Small and Medium-Sized Farms Program" of The National Research Initiative of the USDA Cooperative State Research, Education, and Extension Service and will conclude in 2008. The project includes a survey and a series of community focus groups to find the values of farmland that accrue to residents, non-farmers, and visitors. The values investigated, which are not traditionally traded in the marketplace, include cultural heritage, scenic beauty, ecological services, and farm-level profitability.

The project team, which includes geographers from Appalachian State University, will also find and interpret information about land use, land cover, population, and other factors. This data will be combined with responses from the surveys and focus groups to create a quantitative assessment tool to identify areas that hold high value in these non-agricultural terms and that may be good candidates for protection through designations such as agricultural zones or cultural heritage districts. Outreach and education programs will familiarize stakeholders in the area with the tool developed and its implications. The project, which will continue through the spring of 2008, is meant to facilitate visualization and discussion in the four-county area among residents and visitors about how best to utilize and protect the farmland in the study region. More information about the project is available at the project website, www.unca.edu/farmlandvalues.

2. The Farm Prosperity Project

The Farm Prosperity Project, in active collaboration with the Farmland Values Project, looks at solutions to the loss of farmland in Western North Carolina by combining new and promising crops with land protection measures such as those offered by local land trusts. The project is led by Jeanine Davis of NC State University with a team of cooperating professionals from seven national, state, and regional organizations, including ASAP. The project is funded by the "Agricultural Prosperity for Small and Medium-Sized Farms Program" of The National Research Initiative of the USDA Cooperative State Research, Education, and Extension Service and will conclude in 2008. The overarching goal of the project is to save farms and farmland in the region by directly aiding farmers in increasing their economic prosperity.

In order to ascertain the combined effectiveness of land preservation techniques and growing new crops, project leaders are working with a group of 30-50 farmers who have recently transitioned into new crops or enterprises like organics or agritourism; have adopted or are considering adopting land preservation measures; or have done neither. The project will formulate a decision-making model to help individual farmers navigate their choices of crops to

grow and preservation measures to implement. The decision-making tool, which is expected to be available both in paper and online formats, will guide growers through a series of questions to ascertain the best combination of growing practices or crops and land preservation for their individual farm. The project emphasizes education as well as direct aid in decision-making based on the assumption that many growers in the project area are not aware of their options in farmland preservation. More information is available at http://www.cals.ncsu.edu/specialty_crops//farmprosperity/index.htm.

3. North Carolina Farmers Retirement and Estate Planning Survey

North Carolina Farm Transition Network (NCFTN) -- a nonprofit organization working to ensure that farms remain in agricultural production by assisting experienced and aspiring farmers in the effective transition of farm businesses – commissioned a 2005 survey to learn more about North Carolina farmers' plans for the future of their farm assets. The survey was conducted in partnership with the North Carolina Department of Agriculture and Consumer Services Agriculture Statistics Division and supported by the North Carolina Tobacco Trust Fund. The survey went to a random sample of 3,042 farmers and resulted in 2,099 responses, a response rate of 69 percent. The average age of respondents was 59 years.

Survey Highlights:

- Almost half of North Carolina's farmers said “yes” with a response that they never plan to retire. Another 35 percent plan to semi-retire, still operating the farm while receiving retirement benefits like social security or pensions. Of the 18 percent of farmers who plan to retire, they expect to do so at age 65.
- Sixty-seven percent of respondents have not discussed their retirement plans with anyone, including family members. Twenty-five percent have begun discussions with their families. However, fewer have consulted with a professional advisor such as a financial planner, which ranked highest over lawyers and others at 7 percent.
- Forty three percent of respondents have made no decision on how their assets will be distributed at their death by indicating that they have not executed a will. Life insurance was the most commonly reported estate planning tool, with 70 percent of farmers having some life insurance in place. The survey did not ask farmers how much life insurance they held, nor whether it would meet family goals for farm continuation.
- Almost 75 percent of North Carolina farmers have not identified someone to manage their farm after they retire. Of the 26 percent who have named a successor, most often this successor was a son or daughter -- average age of 33 years -- 50 percent of whom currently work off the farm. When asked how they intend to pass on their farm, 33 percent reported an equal division, whereas 22 percent reported they would like to keep the farm as “one unit” or “in the family.” Thirty-one percent declined comment.

More information is available from Andrew Branan, executive director, North Carolina Farm Transition Network, at (919) 782-1705 extension 8290 or abranan@ncfb.net.

4. Agricultural Community Support Across Boundaries

In November of 2006, in response to perceived fragmented efforts to serve and strengthen agricultural communities in Western North Carolina, Land of Sky Regional Council initiated a research project to explore opportunities for collaboration and identify high priority areas of interest for diverse stakeholder groups in the region. The project was funded by the Southern Sustainable Agriculture Research and Education Program of the USDA as a Sustainable Communities Project.

While there were many concepts in common as the different groups discussed the needs of farm families and rural communities, the importance that they assigned to the various topics varied from group to group. High priority areas are by stakeholder group include:

- **Farmers** – Both farmer groups ranked affordable health insurance and other “fringe benefits” like retirement plans as very important to their future success. Similar to recent comments by auto manufacturers, agricultural entrepreneurs see the importance of providing medical coverage but see themselves at an economic disadvantage when they compete with growers in other countries whose medical coverage is provided by national programs at no expense to individual farm businesses. They also see value in minimizing the capital tied up in equipment when that equipment is critical but rarely used. A potato digger, for example, is used only a few days a year on most diversified mountain farms and can reasonably be shared with other growers. An equipment pool may be one way to free up some of the capital that is now tied up in the equipment shed for most of the year. Supporting and expanding producer-only markets is also popular with growers. In our area, the Appalachian Sustainable Agriculture Project supports the Mountain Tailgate Market Association that promotes direct sales to consumers with advertising, training, and management support. As a result of their efforts, as well as demographic trends, the increasing interest in direct purchase of local agricultural products suggests that this niche market will continue to grow.
- **Agricultural Advisors** – The advisors group was very aware of shifting agricultural markets, the aging farm operator population, and development pressure on the agricultural land base. They presented a wide variety of ideas for consideration by others in their group. Local direct marketing infrastructure and assistance ideas came up often, as well as transition and financial planning assistance. They also saw the need for incentives to keep farmland in farming.
- **Rural Community Groups** – While farmers focused more on the economics of their farm enterprises, rural community groups were more aware of the potential implications of urban growth for the future of their agricultural communities. They supported ideas such as impact fees to slow growth and restrictions on the ability of cities and towns to annex agricultural land. They also raised the idea of compensating farmers for services such as flood protection and providing scenic vistas as a new “cash crop” to consider.
- **Local Elected officials** - Of the high vote-getters among the ideas generated by this group, two were very similar (diversification and knowledge-rich farm enterprises). Together these two topics pulled in a commanding 29 votes. This result suggests that local officials

see farming as a business that needs to shift with the shifting demands of the marketplace. Local officials see the need to support the natural entrepreneurial spirit that exists in our rural communities without taking responsibility for the success of individual businesses. Two of the high vote-count ideas suggest action by local governing boards – supporting farmers markets and adopting local food policies. Farmers markets support could take place with existing staff and existing physical facilities like parks and pavilions. Adopting a local food policy could be a no-cost action, but some experiences suggest that there are implications for school cafeteria budgets and some training may be needed to deal with local food sources (local new potatoes vs. frozen french fries, for example). So there may be some costs involved at the cafeteria level. Some may say that students will receive a more nutritious lunch as a result of using fresh local food and will be better able to learn as a result, perhaps suggesting that any needed investment is worthwhile over the long term. Items related to taxes, new staff, or funding new programs were not very popular with elected officials. This outcome is probably not surprising given the timing of our inquiry during local government budget season. It also suggests that local governments are likely to play a stronger role in supporting the local agricultural economy through policy support than in direct funding or staff support.

More information is available from the Land of Sky Regional Council, info@landofsky.org.



Southern Sustainable Agriculture Research and Education (SSARE)

southernsare.uga.edu

SSARE provides grants and information to improve profitability, stewardship and quality of life

Appalachian Sustainable Agriculture Project (ASAP)

asapconnections.org

ASAP is a nonprofit organization that supports farmers and rural communities in the mountains of Western North Carolina and the Southern Appalachians by providing education, mentoring, promotion, web resources, and community and policy development.