



**Local Food and Farm Assessment:**  
*Avery, Rutherford, and Yancey Counties*

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By: Local Food Research Center  
ASAP (Appalachian Sustainable Agriculture Project)  
306 West Haywood Street  
Asheville, NC 28801  
828-236-1282

**About ASAP (Appalachian Sustainable Agricultural Project):**

ASAP has been a national leader in the local food movement for more than a decade. ASAP's mission is to help local farms thrive, link farmers to markets and supporters, and build healthy communities through connections to local food. The organization's work includes a broad array of planning, communication, grassroots organizing, research, and advocacy in order to generate awareness of local farms and increase consumer demand for local food, develop the regional capacity to support local farms, expand the availability of locally grown food, and foster systemic change in agriculture and the food system.

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## *Introduction*

This assessment is part of the Farm to School to Community Project, supported by the BlueCross BlueShield of North Carolina Foundation. The goals of the project are to increase the availability of local foods, improve food environments, and promote positive relationships with healthy, local food in three communities in North Carolina: Avery, Rutherford, and Yancey counties. Project activities are working across multiple food system intervention points – food procurement, distribution, and marketing systems, as well as educational, institutional, and retail sites – to achieve systemic food environment impacts.

This report presents a summary analysis of the food and farming economies in Avery, Rutherford, and Yancey counties. Report findings are based on primary and secondary data and published statistics from the USDA Census of Agriculture, the U.S. Census Bureau, other relevant data sources, and on the results of surveys conducted by ASAP in 2013 with businesses located in Avery, Rutherford, and Yancey counties. These findings will be used to inform project strategies and to address the expansion of the region’s local food system in the target communities and to inform strategies of other communities in the region dealing with similar goals and issues.

## *The Food and Farm Economy in Rutherford, Yancey, and Avery Counties*

Over the last half century, concentration in the ownership, management and the industrialization of food production and marketing has dramatically restructured the agricultural and food industries in the U.S. and globally. Increasing farm and food industry consolidation has resulted in significant losses in North Carolina farms and infrastructure. The impacts of these developments are evident in the decreasing ability of communities to produce food for themselves, the growing disconnect from food production, the loss of cooking skills and traditional food ways, the emergence of food deserts, and increased rates of obesity and other food-related illnesses in the population. Despite these trends, agriculture remains integral to Western North Carolina (WNC) and interest in building community-based food systems is growing. With many WNC farmers exiting tobacco and other types of agricultural production, there is tremendous need and opportunity to shift farm production to satisfy the needs of local, community-based food systems.

Avery County, Rutherford County, and Yancey County are rural communities of the Southern Appalachians of WNC that offer a unique set of opportunities and challenges to building their local food system capacity and growing their local food economies. Figure 1 shows the location of the three project counties. Avery and Yancey counties are located in the mountainous High Country of WNC while Rutherford County is located further south in the Foothills.

**Figure 1. Map of Avery, Rutherford, and Yancey counties**

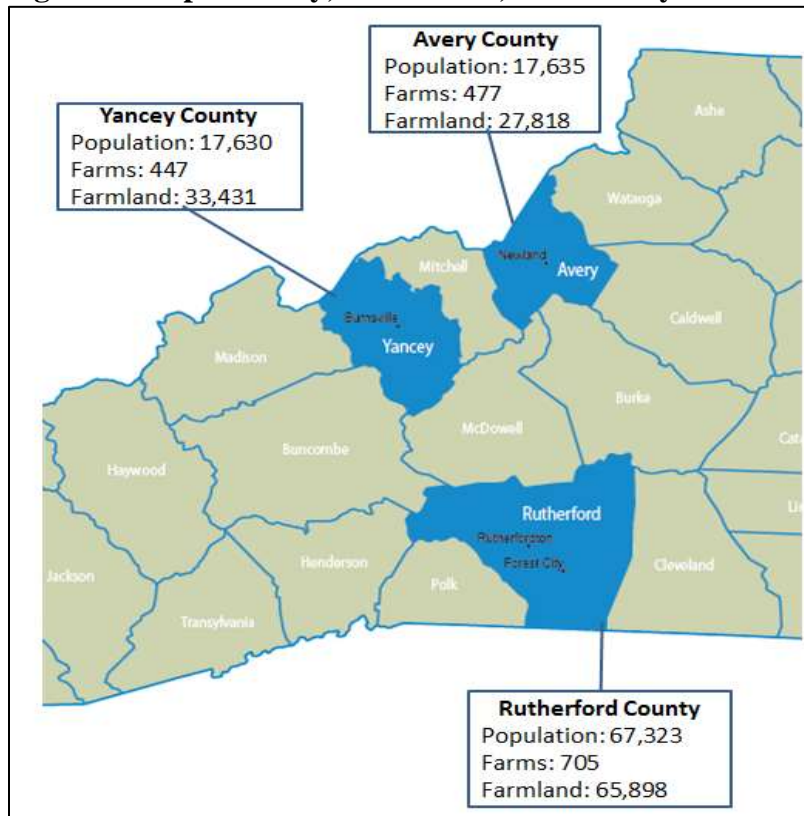


Table 1 illustrates the trends in farm numbers and farm sizes in the three counties over the decade from 1997 to 2007. According to Census of Agriculture data, Rutherford County experienced the greatest amount of farm growth from 1997 to 2007, adding 200 farms. The majority of these additions were in smaller farms (49 acres or less), which reduced the average farm size of Rutherford County farms from 121 acres in 1997 to 93 acres in 2007. Avery County farms experienced a similar, though less pronounced growth, rising 12 percent, with farms 49 acres or less making up the bulk of the county’s total farm numbers in 2007. This growth in small to middle size farms is commensurate with national farm data. In the U.S., the total number of farms increased 3.6 percent from 2002 to 2007 with the majority of this increase occurring in small farms.

In contrast, over the same time period Yancey County farms experienced a decline in overall numbers but an increase in average farm size (from 66 acres in 1997 to 75 acres in 2007). Small farms were most affected (farms smaller than 100 acres experienced a 29 percent decrease from 489 farms in 1997 down to 347 farms in 2002; those over 100 acres experienced a 13 percent decrease from 115 farms in 1997 down to 100 farms in 2007). Much of the farm loss is likely attributable to the decline in tobacco production in the region. From 1997 to 2007, 92 percent of farms growing tobacco ceased growing the crop (from 363 farms in 1997 to 28 in 2007) resulting in an 88 percent reduction of tobacco farmland acres (from 1,169 acres in 1997 to 134 acres in 2007). Even with these losses, the backbone of farming in Yancey County lies in small to medium sized farms (179 acres or less), which accounted for 91 percent of farms in the region in 2007.

**Table 1. Farms and Acres of Farmland, 1997-2007**

	Avery		Rutherford		Yancey	
	2007	% Change 1997-2007	2007	% Change 1997-2007	2007	% Change 1997-2007
Farms	477	+12%	705	+40%	447	-26%
Land in farms (acres)	27,818	+3%	65,898	+8%	33,431	-17%
Average size of farm (acres)	58	-8%	93	-23%	75	+14%
1 to 9 acres	88	+13%	45	+114%	76	-45%
<b>10 to 49 acres</b>	<b>214</b>	<b>+22%</b>	<b>307</b>	<b>+115%</b>	<b>192</b>	<b>-23%</b>
50 to 69 acres	63	+7%	61	-3%	31	-38%
70 to 99 acres	55	+10%	84	+29%	48	-9%
100 to 139 acres	24	-20%	75	-9%	45	+15%
140 to 179 acres	16	+60%	38	-3%	16	-30%
180 to 219 acres	5	-58%	18	0%	15	-17%
220 to 259 acres	1	n/a	27	+59%	6	-46%
260 to 499 acres	6	-50%	36	-10%	13	-19%
500 to 999 acres	3	+200%	12	-25%	2	-71%
1,000 acres or more	2	-50%	2	+100%	3	+200%

Source: USDA Agricultural Census, 1997, 2002, and 2007

### *Cash Receipts from Farming*

For 2007, total agricultural receipts reported for Avery, Rutherford, and Yancey counties were over \$32 million. Field crops accounted for 77 percent of total sales in 2007 compared to livestock, poultry, and their products, which accounted for 23 percent of sales.

Looking at the county-level data for 2007, as shown in Table 2, it is clear that Avery County agricultural production was dominated by crops, Rutherford County had a predominance of livestock and poultry production, and Yancey County was fairly evenly split between the two with a moderate favoring toward crop production.

According to the 2007 Census of Agriculture, Avery County ranked second in the state for short-rotation woody crops and third for cut Christmas trees and nursery stock; Rutherford County ranked sixth in the state for “other animals and animal products” (e.g., horse breeding stud fees); and Yancey County ranked 12<sup>th</sup> in the state for cut Christmas trees. In other words, food production is not a primary focus of agricultural production in any of the three counties.

**Table 2. Market Value of Agricultural Products Sold, 2007**

	Avery	Rutherford	Yancey
Total value of agricultural products sold	\$20,522,000	\$6,590,000	\$5,173,000
Value of crops including nursery and greenhouse	\$20,103,000	\$1,453,000	\$3,215,000
Value of Fruit and Vegetable sales	\$122,000	\$410,000	\$439,000
Value of livestock, poultry, and their products	\$419,000	\$5,137,000	\$1,958,000
Direct sales to consumers	\$82,000	\$300,000	\$171,000

Source: USDA Census of Agriculture, 2007

### *Economic Considerations*

The USDA uses net cash farm income to report on the profits and losses of farm businesses. Net cash farm income is calculated by subtracting farm expenses from gross farm income. Net cash farm income for farmers in Avery County in 2007 was \$3.4 million dollars with farms earning \$7,195 on average. For the same year, net cash income in Rutherford County was negative with farmers losing \$2.9 million dollars overall. 533 Rutherford County farms reported net losses, averaging \$9,276 in losses per farm, while 172 Rutherford County farms reported net gains, averaging \$11,838 per farm. It is unclear from the census data why Rutherford County farms experienced negative net incomes. It should be noted, however, that Rutherford farms reported greater losses in the 2002 census (\$5 million dollars in losses). Therefore, even though net incomes in Rutherford County were negative in 2007, they showed improvement from 2002 figures. Yancey County farms reported \$2.3 million dollars in net cash farm income in 2007 with farms earning \$1,197 on average.

Figures 2 and 3 graphically show net cash farm income for the three counties in 2007. In terms of net income, the trend across all counties is the same with the average net profit earned by farms reporting net gains exceeding the average net loss of farms reporting losses.

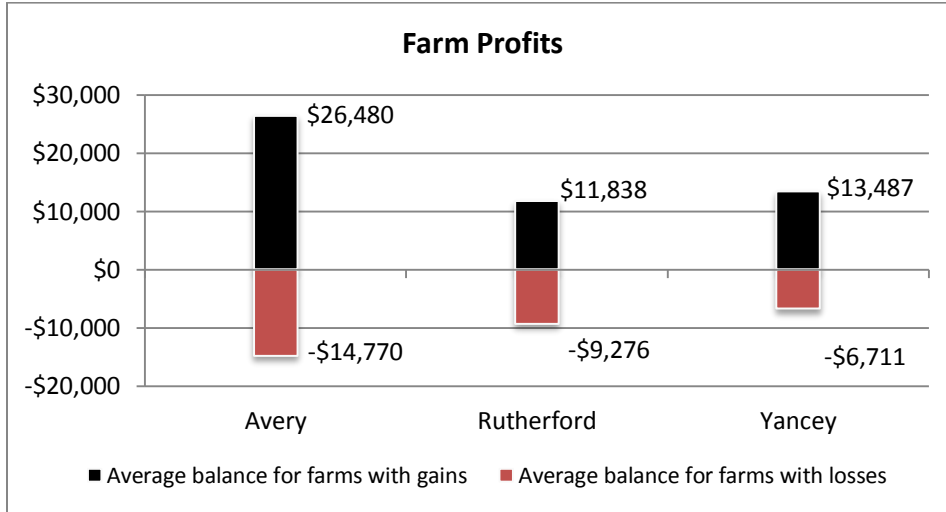
#### *A Fruit and Vegetable Production Scenario:<sup>1</sup>*

Fruit and vegetable production is a natural starting place for local food systems development because it has low barriers of entry and minimal infrastructure requirements for farmers. It also provides nutritious food options for the local community. The productive capacity of local fruit and vegetable farms in a region is therefore critical to local food systems development.

At current production these three counties produce an equivalent of fresh fruits and vegetables to feed only 19 percent of the population, showing that there is ample opportunity to expand local production to supply local food demand.

<sup>1</sup> The United States Bureau of Labor Statistics estimates that Southerners spend an average of \$403 per year on fresh fruits and vegetables. This dollar value is approximately three times higher than the price farmers receive for their product. Therefore, if farmers in the three counties sold \$971,000 produce in 2007, this would translate to approximately \$2,913,000 of fresh fruit and vegetable products in the marketplace, or enough to supply 7,626 consumer units (19,065 people) for one year (19 percent of the combined population of the three counties).

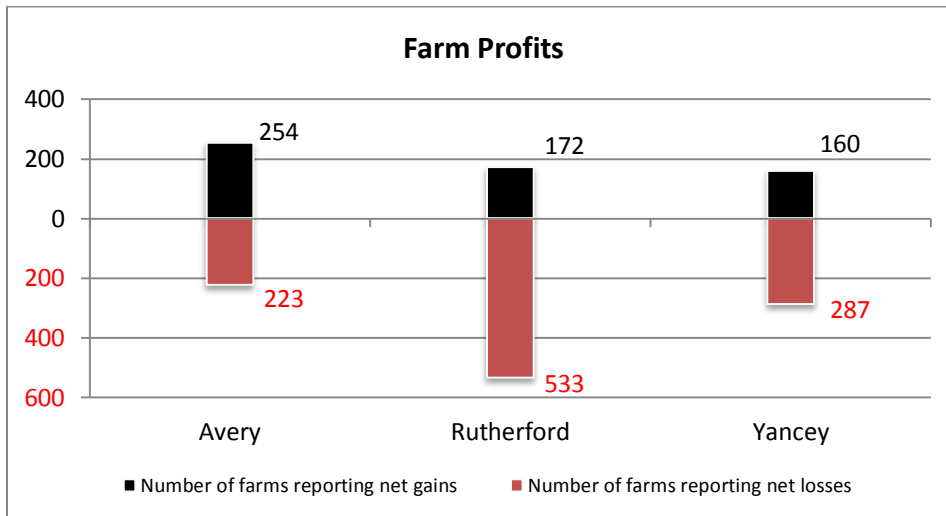
**Figure 2. Net Cash Farm Income in Avery, Rutherford, and Yancey (2007) Average Farm Dollars**



Source: USDA Census of Agriculture, 2007

However, when it comes to the number of farms reporting net gains and losses, Avery County was the only county with more farms reporting gains than those reporting losses. Both Rutherford and Yancey counties had more farms reporting net losses with nearly twice as many Yancey County farms reporting losses as those reporting gains, and over three times more Rutherford County farms reporting net losses compared to those reporting net gains.

**Figure 3. Net Cash Farm Income in Avery, Rutherford, and Yancey (2007) Number of Farms**



Source: USDA Census of Agriculture, 2007

It is not uncommon for small family farms to report a loss, but this pattern does not necessarily mean farms are losing money. Farm operations, for example, are afforded many federal tax



breaks and write offs, and small farms often maximize benefits, using business expenses to offset income.

The Census of Agriculture uses tax-based definitions to measure farm profitability and success, but these measures are not always accurate, nor are financial measures the only way to show success. There are a large number of farmers in the Census of Agriculture who do not farm as their primary occupation and who earn money from off-farm jobs that is not included in Census of Agriculture reports. In the 2007 Census of Agriculture, 630 farmers in the three counties reported farming as their primary occupation while 999 reported “other” as their primary occupation. Some farms stay in farming for reasons other than supporting the family income, such as continuing a family tradition, maintaining a rural lifestyle, or so that they can access tax breaks given to farms through programs like Present Use Valuation, which taxes farm property at a significantly lower rate than non-farms.

The Census of Agriculture data does not account for the income earned from off-farm jobs or property tax savings. Therefore, it is difficult to determine which farms in the three counties are actually losing money overall and which farms are financially viable due to tax credits and outside income. Net cash farm income data is useful in understanding a broad pattern of the financial profile of a region’s farms, but the data the census collects is limited and does not provide a complete picture of farm profitability.<sup>2</sup>

Regardless, the long term sustainability of farming depends on the ability of farms to make money. The capacity 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 market prices, which are largely out of producers’ control. One promising opportunity for rural farms lies in the rise in the popularity of local food and farm products, which can provide an avenue for increased prices and lower production and distribution costs for farmers.

### *Opportunities in the Local Market for Locally Grown Foods*

Data released by the USDA Economic Research Service reports that nationally local food sales through direct and intermediate markets grossed over \$4.8 billion in 2008. For direct sales alone, the 2007 Census of Agriculture reported \$1.2 billion, a 50 percent increase from the direct sales total in 2002 of \$812 million. Agricultural Census data for 2007 further shows an increase in the number of farms, particularly small farms (those less than 50 acres), which reverses a decades-long trend. Both trends reflect the rapidly growing consumer interest in knowing who is growing their food. National market research by firms like the Hartman Group and JWT Advertising have tracked the shift in consumer demand to favor locally grown foods and have identified “local” as one of the food attributes most highly valued by consumers nationwide.

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<sup>2</sup> Robert A. Hoppe, P. Korb, E. O’Donoghue, D. Banker, *Structure and Finances of U.S. Farms: Family Farm Report, 2007*. June 2007. Economic Research Service, USDA.

ASAP recently calculated local food spending by residents of Western North Carolina to be over \$120 million in 2012. A 2011 consumer survey of Western North Carolina residents further showed strong demand for local products and a willingness to pay more for local food. For the vast majority of consumers surveyed, local food offered a fresher, tastier option to foods produced in more distant regions, as well as a way to support local farmers, local communities, a healthy environment, and the rural character of the region. By extension, these values shape the way residents shop for food and dine out: the survey found that over three-quarters of respondents (77 percent) deemed local food a somewhat or very important consideration in choosing a grocery store, and 64 percent viewed it as somewhat or very important when choosing a restaurant.

Further supporting the national and regional data, county level data demonstrates that high levels of demand for local food exist and interest by food retailers and wholesalers in meeting consumer demand is increasing. In early 2013, ASAP conducted a survey of businesses and institutions located in Avery, Rutherford, and Yancey counties to determine their interest in buying and using locally grown food, as well as the obstacles they face when trying to source local product. Survey data shows that 76 percent of survey participants say they already purchase locally grown foods for their organizations, yet 69 percent indicated that they are unable to purchase all of the local products they desire due to lack of availability of product and the absence of farms able to meet their safety certification standards (e.g., Good Agricultural Practices (GAP) certification). However, each business expressed interest in local food purchasing for the freshness and flavor locally grown products offer compared to their non-local alternatives.

### *Local Production Data*

Two of the foundational goals in the Farm to School to Community project are to: (1) increase the number of farmers providing healthy, local food to outlets within Avery, Rutherford, and Yancey counties and to (2) increase the number of institutions and outlets within these counties serving, procuring, and providing access to healthy, local food.

The first step to achieving these goals is to baseline the current status of local food production in the three counties. Table 4 shows production volumes and consumption estimates of a variety of fresh fruits and vegetables that are produced in Avery, Rutherford, and Yancey counties. The column labeled “Acres in Production” shows the current production as of 2007. The figures in the column titled “Sufficient to supply (x)% of residents” are based on a calculation to estimate, based on per capita consumption of each food item by county residents, the approximate amount of local demand that could be supplied by local production.<sup>3</sup> Note that county-level production acreage data is inexact. 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 that are based on limited information. All estimates should be viewed in this context.

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<sup>3</sup> For each food item: Sufficient to Supply (x)% of the Local Population = (acres in production\* yield in pounds per acre) / (population\*per capita consumption in pounds) aka pounds produced divided by pounds consumed.

**Table 3. Production of Selected Fresh Fruits and Vegetables, 2007<sup>4</sup>**

<b><i>Avery County</i></b>		
	Acres in Production	Sufficient to supply (x)% of Avery Residents
Berries	9	105%
Potatoes	41	103%
Pumpkins	25	612%
<b><i>Rutherford County</i></b>		
	Acres in Production	Sufficient to supply (x)% of Rutherford residents
Beans (snap)	7	33%
Bell peppers	1	2%
Berries	12	37%
Corn	42	39%
Cucumbers	6	18%
Grapes	6	9%
Peaches	25	220%
Potatoes	12	8%
Squash	4	43%
Tomatoes	14	28%
Watermelon	72	170%
<b><i>Yancey County</i></b>		
	Acres in Production	Sufficient to supply (x)% of Yancey residents
Carrots	1	16%
Corn	8	28%
Lettuce	2	10%
Bell peppers	3	18%
Potatoes	14	35%
Pumpkins	2	49%
Sweet potatoes	1	18%
Tomatoes	8	61%
Beans (snap)	5	89%
Cucumbers	1	12%
Squash	64	2,614%

Source: [Column 2] USDA Census of Agriculture, 2007; [Column 3] NCDA&CS [Predicted Yield lbs/acre 100%](#), ERS/USDA Data Food Availability (Per Capita) Data System: Food Guide Pyramid (2011);

Though many products produced in the three counties eclipse annual local consumption - pumpkins in Avery, peaches in Rutherford, and squash in Yancey - most products are grown or raised in amounts that can supply less than 50 percent of resident demand in each county or not currently grown at all. In other words, Table 3 shows that there is ample opportunity for local

<sup>4</sup> The products listed in Table 3 include commonly consumed fruit and vegetable products grown in the region that as recorded in the 2007 Census of Agriculture. Though other fruit and vegetable products are grown in these regions, acreage data is undisclosed or unavailable in the census.

production to supply current local consumption and for local production to be expanded to meet local demand.

Table 4 shows that, like the case of fresh fruits and vegetables, yearly reported production of meat products and cow’s milk in the region is generally lower than consumption.

Achieving a level of supply of the products shown in Table 3 and Table 4 equal to the level of consumption by local residents is not a feasible goal; instead, there is some point between what is currently produced and what is currently consumed that represents a practical target for local production in a strong local food system.

**Table 4. Production of Selected Meat and Dairy Animals, 2007**

<b><i>Avery County</i></b>		
	Number of Animals	Sufficient to Supply (x)% of the Avery Population
<i>(none recorded in census)</i>	n/a	n/a
<b><i>Rutherford County</i></b>		
	Number of Animals	Sufficient to Supply (x)% of the Rutherford Population
Chicken	126,018	9%
Hogs	464	2%
Turkeys	38	0.1%
<b><i>Yancey County</i></b>		
	Number of Animals	Sufficient to Supply (x)% of the Yancey Population
Beef Cows	3,010	39%
Dairy Cows	154	15%

Source: [Column 2] USDA Census of Agriculture, 2007; [Column 3] USDA Census of Agriculture, 2007, ERS/USDA Data Food Availability (Per Capita) Data System: Food Guide Pyramid (2011);

It is also important to note that while Table 3 and Table 4 show overall production for selected fresh fruits, vegetables, meat, and dairy products in Avery, Rutherford, and Yancey counties, they do not differentiate between farms that sell their products to local markets and those that do not. A better picture of local production for local consumption comes from ASAP’s Local Food Guide, an annually updated directory of Southern Appalachian farms that sell locally and the businesses that support them. The guide lists a total of 56 farms in Avery, Rutherford, and Yancey counties that focus on selling their farm products to local markets, or about seven percent of farms that produce food in the three counties.

Though the majority of the three counties’ farm products are not marketed for local consumption, many farms in the three counties have found successful niche markets for their products both at home and in nearby population centers like Johnson City, Tennessee, Asheville, North Carolina, Charlotte, North Carolina, and Greenville, South Carolina. The Avery, Rutherford, and Yancey farms listed in ASAP’s Local Food Guide grow a wide variety of fresh produce, meats, and cheeses that they sell to area grocery stores, distributors, food processors,

schools, hospitals, and restaurants. Ten of the farms also offer CSA programs. Together, these farms produce each of the 23 food items listed in Table 5.

**Table 5. Avery, Rutherford, and Yancey County Farms in ASAP’s Local Food Guide Producing Selected Farm Products, 2013**

	Number of farms
Apples	6
Berries (other than strawberries)	22
Cantaloupe	8
Grapes	4
Peaches	4
Watermelon	9
Beans (snap)	26
Carrots	20
Corn	18
Cucumbers	24
Mushrooms	5
Lettuce	23
Peppers (Bell)	29
Potatoes	27
Pumpkins	17
Squash	27
Sweet Potatoes	14
Tomatoes	28
Beef	9
Chicken	8
Pork	6
Turkey	5
Milk	1

Source: ASAP’s Local Food Guide, 2013 <http://www.buyappalachian.org/>

In addition to the Local Food Guide, ASAP produces the Wholesale Local Food Guide, a farm to business trade directory; a food buyer’s guide to the products that local farms offer to businesses, and a local farmer’s guide to products that wholesale food buyers are seeking. The wholesale guide currently lists 31 farms in Avery, Rutherford, and Yancey counties producing and selling product to local restaurants, school systems, and specialty food buyers.

Even with this demand for their products, small producers selling their products to local markets face a unique set of legal and infrastructure obstacles. For instance, producers growing fruits and vegetables face infrastructure challenges, such as the need for refrigerated trucks and warehouse space. For small meat producers, access to a nearby government-inspected processing facility is the principal infrastructure obstacle. Artisanal meat producers also require land for pasture, on-farm animal handling facilities, and adequate cold storage for processed meat products. All farmers selling to local markets must learn industry standards for different types of local market outlets; packaging, labeling, food safety requirements, distribution, quality standards, traceback standards, etc. to succeed in the local marketplace. However, once producers can successfully navigate local markets, there is opportunity for increased returns and additional economic impact for the region.



### *Local Market Potential for Locally-Grown Foods*

The Farm to School to Community Project is designed to increase access to fresh local produce and create experiences and relationships that encourage children to eat fresh, healthy, local foods while strengthening the development of local food supply chains. The emphasis on expanding local markets for local farm products 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, reduce total costs by shortening the transaction chain between farmers and end consumers, and build community by fostering relationships between the producers and purchasers of local food within a community. The Farm to School to Community Project begins with a focus on increasing access to and opportunities for farmers to sell their local food products to local school districts in Avery, Rutherford, and Yancey counties, then expands to include restaurants, groceries, Head Start centers, hospitals and colleges.

To assess the views Avery, Rutherford, and Yancey businesses associate with locally grown foods, a survey was sent to restaurants, public school systems, Head Start centers, childcare centers, senior centers, residential facilities, grocers, and hospitals located within the three county area. Focus areas in the survey included food procurement practices, interest in local food sourcing, and obstacles to local food sourcing. Nineteen businesses participated in the survey.

The majority of Avery, Rutherford, and Yancey county businesses that participated in the survey said that they purchased local food in the past year (76 percent). The majority of respondents expressed their motivation to purchase local foods for their businesses because of the freshness and flavor of local options, but 69 percent said that they are currently unable to purchase all of the local products they desire because of a lack of availability and the limited number of area GAP certified producers and distributors. Other barriers these rural buyers face when trying to source locally are: lack of distributors that carry local, seasonal availability (for example, a child nutrition director noted that the majority of local production is available over the summer months when children are not attending public school), and price.

The overall trend in responses from the businesses in the three counties is of high interest in purchasing local foods, high interest in receiving information on how to access more local products, and high interest in diversifying the types of local food products they choose to purchase, but specific barriers exist in these communities that are preventing the expansion of local purchasing.

Both the primary evidence collected from residents and agricultural data show strong demand and potential for local food system development in these three rural counties. Yet, as is common in rural communities, there are clear production, infrastructure, and cooperative barriers that

must be addressed for these communities to be able to develop the thriving local food systems they desire. A critical factor that will predicate success is the ability of various community members representing the different food sectors—farming, private food businesses, distribution, etc., --to do the research and planning and then collaborate in addressing the specific needs of their communities. This will involve on-the-ground work that brings together stakeholders from the different food sectors to identify what types of training and technical assistance are needed, and what types of projects are suitable and feasible based on available community resources. By working together and building these connections, rural counties can establish the critical mass of knowledge, skill, and resources it will take to build a sustainable local food system.