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Tools for Community Self-determination

Key Findings and Recommendations for Next Steps in Local Food Systems Implementation for the Rappahannock-Rapidan Region of Virginia

With additional data covering the entire Northern Piedmont

Report to Rappahannock-Rapidan Regional Commission Culpeper, Virginia

> Ken Meter, Crossroads Resource Center April 8, 2015

Geographic focus: Culpeper, Fauquier, Madison, Orange, and Rappahannock Counties

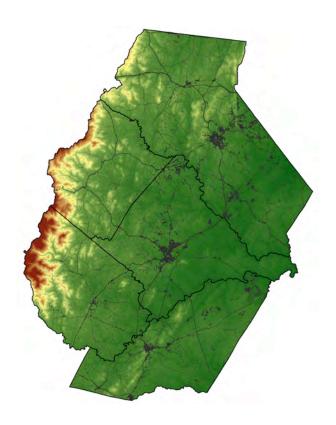




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Executive Summary

The five-county Rappahannock-Rapidan Region is **blessed with ideal conditions for creating a more localized food system.** With a consumer base that purchases \$421 million of food each year, and 8% of the state's land base in agriculture, the key elements are already in place. Further, the region enjoys a rich agricultural heritage, established food traditions, an enviable growing season, and hosts a rich diversity of soil and climate types. Overall, the region is well positioned to produce much of its own food.

Yet interviews with key food practitioners showed that food offerings at many restaurants and food services are **less local than they were even a few years ago**, despite rising national attention to the importance of local foods, and what appears to be burgeoning interest from consumers. The central issue appears to be a **lack of supply** of food priced for wholesale markets. Food service buyers lamented both that some local food options cost more money than they can budget, and also that supply was not consistently available throughout the year.

On the consumer side, while chefs and grocers report that their clientele seeks locally produced food, **local residents are not always willing** to spend extra time sometimes required to track it down. Some may balk at paying slightly higher prices than they are used to paying. One baker, for example, noted that about half of their sales of artisanal bread, made from freshly ground flour, are currently being sold to visitors, not to local residents.

Meanwhile, some of the more visible farming projects have dedicated themselves to selling food outside of the region, rather than creating new local supply networks. This may bring benefits to the region, but it continues the Rappahannock-Rapidan Region's dependence on supplying external markets that over the long term have not been rewarding to farmers.

Significantly, the 3,455 farmers in the Rappahannock-Rapidan Region have experienced an average annual net loss of 22% of sales while producing crops and livestock. Over the past 25 years, the region's farmers have sold on average \$210 million of crops and livestock but have spent \$257 million on production. This equates to a combined average annual shortfall of \$47 million, or \$13,460 per farm. All told, \$1.2 billion has flowed out of the region over the last 25 years because farm production costs exceeded cash receipts for 21 years of that quarter century. Indeed, 70% of the region's farms reported that they lost money in 2012 and RRRC region farmers earned \$102 million less by selling commodities in 2013 than they had earned in 1969 (in 2013 dollars).

Yet as significant as these losses are, they are dwarfed by input purchases. Even allowing for the fact that CFC Co-op supplies many of the region's farmers with seed, feed, and inputs, the region's farmers spend an estimated \$110 million per year purchasing essential farm inputs from external sources. This means a further flow of \$27 billion away from the Rappahannock-Rapidan Region over the past 25 years.

With consumers purchasing \$390 million per year of food that is sourced outside of the region, the Rappahannock-Rapidan Regional food economy leaks more than \$550 million of potential wealth each year. This loss amounts to more than twice the value of all food commodities raised in the region.

Clearly the regional economy has nothing to lose from converting its focus from feeding those outside the region, to set a priority of feeding its own people first and exporting the surplus. RRRC and its local partners will have its greatest impact if it focuses its attention on these local supply networks, creating new local efficiencies in food trade.

Key Recommendations for the Rappahannock-Rapidan Region:

- 1. The Rappahannock-Rapidan Region should address the shortage of farm labor by investing in concerted training.
- 2. The region should foster the creation of new initiatives to grow new farmers that are ongoing and holistic, not simply stand-alone training programs.
- 3. The region should coordinate efforts to build appropriate local foods infrastructure across the region, beginning at the farm level.
- 4. The region should support ongoing efforts to build a community-use processing kitchen.
- 5. The region will want to continue, in close collaboration with other partners, to foster coordination of local foods activities across its region. At least one local foods coordinator for the Rappahannock-Rapidan Region should be hired.
- 6. No action need be taken by the region with regard to meat processing at this time.
- 7. The region should also foster marketing campaigns that promote a variety of goals.

Research Findings

To explore the potential for local food, the RRRC, acting on behalf of local partners, commissioned Crossroads Resource Center to interview a dozen food system practitioners in an effort to understand more closely how these assets could be martialed toward a strengthened local food system in the Northern Piedmont.

Interviews with local food-system leaders

The following food system leaders were interviewed by Michelle Edwards of RRRC and Ken Meter of Crossroads Resource Center during the week of January 12, 2015, with one follow-up interview performed by Meter in the last week of January because this source was unavailable for an in-person interview during the selected week. This list of interviewees was developed by RRRC in collaboration with local food experts.

- Matt Baer, Local Food Hub, Charlottesville (Albemarle County)
- **David Durr**, CFC Farm and Home, Culpeper (Culpeper County)
- **Jimmy Graves**, Graves Mountain Lodge, Syria (Madison County)
- **Amy Hudson**, Moving Meadows Farm & Store, Culpeper (Culpeper County)
- Wally Hudson, Moving Meadows Farm & Store, Culpeper (Culpeper County)
- Clay Jackson, Senterfitt Farms, Madison (Madison County)
- Francis Ngoh, Rock Creek Run Farm, Goldvein (Fauquier County)
- Clark Ohrstrom, Fauquier's Finest Meat Processing, Bealeton (Fauquier County)
- Luca Paschina, Barboursville Vineyards/Palladio Restaurant, Barboursville (Orange County)
- Erik Plaksin, Waterpenny Farm, Sperryville (Fauquier County)
- **Michael Rodriguez**, Fauquier's Finest Meat Processing, Bealeton (Fauquier County)
- Mark Seale, Blue Ridge Produce, Elkwood (Culpeper County)
- Ken Smith, MooThru Dairy, Remington (Fauquier County)
- Kristen Suokko, Local Food Hub, Charlottesville (Albemarle County)
- James Wedderburn, Fauquier Hospital, Warrenton (Fauquier County)

While these interviews provided an excellent overview of conditions in the Rappahannock-Rapidan Region, this is a limited sample. Deeper exploration requires further research.



Blueberry fields at Waterpenny Farm in Rappahannock County. Photo © Ken Meter, 2015.

The Rappahannock-Rapidan Region holds key food and agriculture assets

The five-county Rappahannock-Rapidan Region is blessed with ideal conditions for creating a more localized food system. With a consumer base that purchases \$421 million of food each year, and 629,295 acres of land currently growing crops and livestock (8% of the state's farmland), enjoying an enviable growing season and a rich diversity of soil and climate types, the region would appear to be well positioned to produce much of its own food.

Moreover, the region is connected to several large markets through major transportation corridors. The closest, the Washington, DC metro area, purchases \$14 billion of food each year, while the entire state of Virginia purchases \$20 billion. Consumers in Richmond, Roanoke, Norfolk, Baltimore, and Philadelphia are also within reach of Northern Piedmont farmers.

Agriculture is an important industry to the state, creating an economic impact of \$55 billion annually and contributing to more than 357,000 jobs, as the <u>Virginia Farm to Table Plan</u> pointed out. Yet farmers in the Rappahannock-Rapidan Region raise only a small amount of food destined for local consumers.

As documented in the data compiled for the Appendix, the Northern Piedmont region (a broader region of 13 counties and 7 towns stretching from Virginia's northern border to Charlottesville)¹ boasts a strong tradition of raising cattle, dairy products, grains, fruits, and vegetables. Consumer interest in local foods nationally is at an all-time high. Private and federal dollars are available for local food system planning and implementation. A small, diverse group of the region's farmers are exploring new production techniques, including energetic newcomers who are forging innovative connections with consumers. Yet overall conditions for the region's 7,566 farmers are rather discouraging. Farmers sell \$360 million of products per year, but spend \$110 million more than this to produce these crops and livestock, for a loss of 30% of cash receipts.

Current Conditions in the Rappahannock-Rapidan Region

Data from the Bureau of Economic Analysis show that the 3,455 Rappahannock-Rapidan Region farmers have sold an average of \$210 million of food commodities per year over the past 25 years. This includes a variety of commodities, as the following table shows:

¹ The broader Northern Piedmont region was defined as the Counties of Albemarle, Culpeper, Fairfax, Fauquier, Greene, Loudoun, Louisa, Madison, Orange, Prince William, Rappahannock, Spotsylvania, and Stafford; and the Cities of Alexandria, Arlington, Charlottesville, Fairfax, Falls Church, Fredericksburg, Manassas, and Manassas Park. See Appendix.

Table 1: Top farm products of the Rappahannock-Rapidan Region — USDA Census of Agriculture (2012)

Note: sales data for many farms is suppressed at the local level out of a concern for keeping business information confidential. Data with missing elements are identified with an asterisk (*).

Product	\$ millions
Ornamentals	*69
Cattle & calves	50
Milk	*28
Corn	*20
Soybeans	*18
Poultry & eggs	*12
Forage crops (hay, etc.)	9.7
Horses	5.3
Fruits & tree nuts	4.5
Vegetables & melons	2.0
Wheat	*2.0

Note that the number one crop produced by Rappahannock-Rapidan Region farmers is ornamentals, such as nursery crops and landscaping plants.

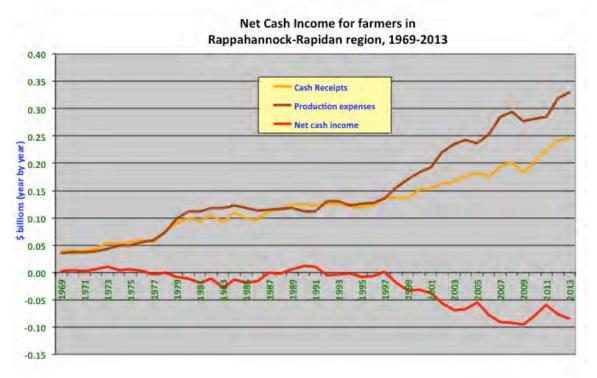
Further, while cattle and calves and dairy are still important products of the region, Bureau of Economic Analysis data show that sales have diminished steadily (in inflation adjusted dollars) over the past 40 years — ironically, even as the region's population has increased. Corn and soybean production have risen in recent years due to rising grain and oilseed prices, and in response to federal programs that favor production of these two commodities.

Data from the Bureau of Economic Analysis also show that Rappahannock-Rapidan Region farmers spend an average of \$257 million each year to raise food commodities that are sold for \$210 million (25-year average, 1989-2013). This is an annual net loss of \$47 million each year, or 22% of sales, a loss of \$13,460 per farm. Totaled over the past 25 years, farmers spent \$1.2 billion more to produce crops and livestock than they earned by selling them.

Farm production costs exceeded cash receipts for 21 years of that 25-year period. Moreover, 70% of the region's farms reported that they lost money in 2012 (Census of Agriculture), and Rappahannock-Rapidan Region farmers earned \$102 million less by selling commodities in 2013 than they earned in 1969 (in 2013 dollars). Some of this decline is due to land being

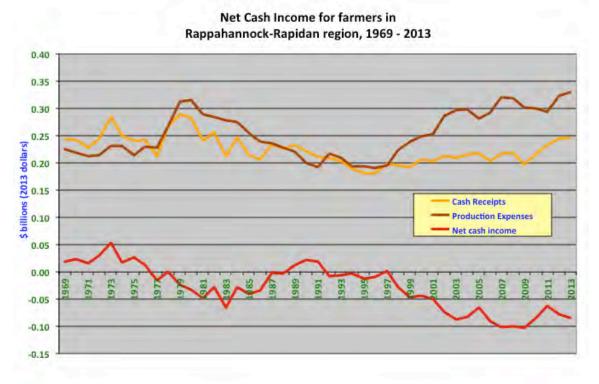
taken out of production, often due to development pressures, and declining margins for cattle production. This means farm families are quite dependent on off-farm income or historically generated wealth.

Chart 1: Net cash income for Rappahannock-Rapidan Region farmers, 1969 – 2013



Source: Bureau of Economic Analysis

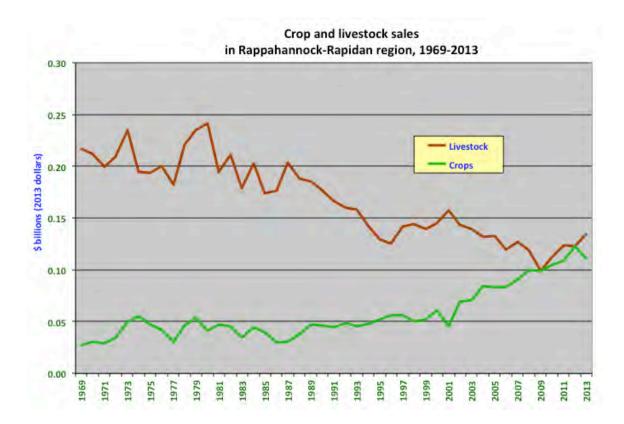
Chart 2: Net cash income for Rappahannock-Rapidan Region farmers, 1969 – 2013 (adjusted for inflation)



Source: Bureau of Economic Analysis

When the orange line in the above two charts is divided into sales from crops and sales from livestock, as on Chart 3, it is clear that one of the key forces driving the decline of farm cash receipts is the decline of livestock sales. Crop income has improved in recent years as corn prices rose to a temporary peak, but these high prices now have softened.

Chart 3: Crop and livestock sales for Rappahannock-Rapidan Region farmers, 1969 – 2013 (adjusted for inflation)

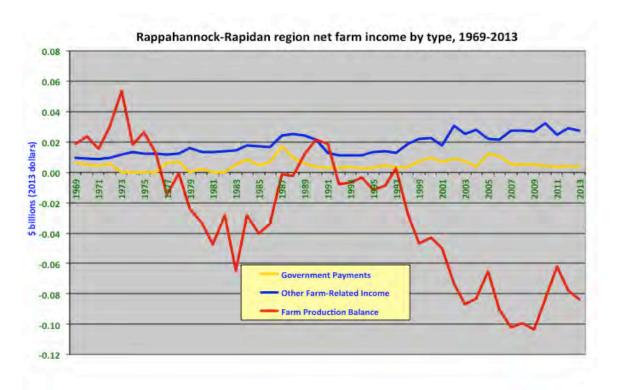


Source: Bureau of Economic Analysis

As Chart 4 below shows, the best source of income farm owners have tapped over the past 40 years has been renting out their land, which turns out to be more lucrative than actually farming it. Farmers and ranchers earn \$22 million per year in farm-related income (rather than in actual production) — primarily performing custom work for neighboring farms, and earning rents for land they own (this is a 25-year average for 1989-2013).

Federal farm support payments are also a more important source of net income than commodity production, averaging \$5 million per year for the region for the same years. These sources of income do not fully compensate for production losses, and of course subsidies are only targeted to farmers raising specific crops, so they do not penetrate the entire farm economy. Only 13% of the region's farmers receive federal farm program payments.

Chart 4: Net farm income by type for Rappahannock-Rapidan Region farmers, 1969 – 2013 (adjusted for inflation)



Source: Bureau of Economic Analysis

Rappahannock-Rapidan Region consumers spend \$421 million buying food each year, including \$250 million for home use, as Table 2 below shows. Most of this food is produced outside the region, so Rappahannock-Rapidan Region consumers spend about \$390 million per year buying food sourced far away. The \$2.8 million of food products sold by farmers directly to consumers (noted above) amount to 1.3% of farm cash receipts and 0.7% of the region's consumer market.

Table 2: Rappahannock-Rapidan Region: markets for food eaten at home (2013): Rappahannock-Rapidan Region residents purchase \$421 million of food each year, including \$250 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 57
Fruits & vegetables	44
Cereals and bakery products	33
Dairy products	26
"Other," incl. Sweets, fats, & oils	89

Rappahannock-Rapidan Region consumers face additional pressure because they are taking on debt. The estimated change in net assets (that is, assets minus liabilities) for all region households combined was a loss of \$209 million in 2013 alone, Bureau of Labor Statistics show.

Summary of the Rappahannock-Rapidan Region farm and food economy:

Farmers lose \$47 million each year producing food commodities, and spend \$110 million buying inputs sourced outside of the region. Even when farmers make money, these input purchases result in substantial losses to the region as a whole. Overall, farm production results in the loss of \$157 million to the region each year.

Meanwhile, consumers spend \$390 million buying food from outside. Thus, total loss to the region is \$550 million of potential wealth *each year*. This loss amounts to more than twice the value of all food commodities raised in the region.

Yet there is opportunity in these losses. If each resident in the region purchased \$5 of food each week directly from a farm in the region, this would generate nearly enough money to cover current production losses. Farmers would earn \$44 million of new sales — 20% of current farm sales, and an average sales of nearly \$13,000 per farm.

Local foods activity is underway in nearby regions

To the west, the lush Shenandoah Valley carries a proud heritage of multi-generation farms, features nationally renowned innovator farmers, fosters agritourism that draws upon

Virginia's rich history, hosts a respected regional produce auction, and supports a cooperative grocery store in Harrisonburg.

Just to the south of the region is an advanced cluster of food initiatives that have sprung up in and around Charlottesville: the nonprofit Local Food Hub has received national prominence in building a \$1.2 million aggregation business that connects about 60 nearby produce farmers with food buyers both locally and in Washington, DC. The greater Charlottesville region is also home to a number of chefs dedicated to sourcing local foods at their restaurants, offering food for the daily consumer as well as for the gourmet. Institutional resources for such local food initiatives abound. Extension specialists at Virginia Tech have played a solid role in building local and statewide networks to help coordinate local foods activity. The University of Virginia has established itself as a prime resource for food innovators. Smaller campuses have helped train farmers, purchased local foods, and convened local stakeholders.

Key food initiatives in the Rappahannock-Rapidan Region

More than one person described the Rappahannock-Rapidan Region as a "doughnut hole" — a region of relative inactivity that is surrounded by two farming areas that focus on selling food directly to customers, often in metro markets such as Washington, DC. Thus, "local" food seems to pass through the Rappahannock-Rapidan Region on its way to urban consumers.

Yet Rappahannock-Rapidan Region farmers have actively pursued localization strategies for years. Responding to the prevailing economics of farming and eating, and fueled by increasing consumer interest in knowing where their food is sourced, the Rappahannock-Rapidan Region has spawned very tangible initiatives.

Fauquier County has adopted some of the most comprehensive programs in the region for protecting farmland by purchasing development rights. Fauquier also hosts the region's sole county-run training program for new farmers.

The Piedmont Environmental Council (PEC) is part of a long-standing national campaign, "Buy Fresh, Buy Local," that currently lists 245 farm and food businesses trading in local foods (in a slightly larger region than RRRC's, as defined by PEC). PEC also connects farmers with chefs who wish to purchase foods locally through their "Farmer-Chef Express" program.

Livestock processing infrastructure

Moreover, farmers wishing to sell to local consumers can count on food processing resources that would be the envy of many regions nationally. Livestock producers have a choice of four slaughter and meat processing plants, each of which offers unique services to an emerging group of producers: Blue Ridge Meats in Middletown (USDA and custom), Gore's Fresh Meats and Deli in Stephens City (custom), T&E Meats in Harrisonburg (USDA full service), and Fauquier's Finest Meat Processing in Bealeton (USDA custom).

However, growers who seek processors for larger-volume orders say they look elsewhere. As one example, Senterfitt Farms relies primarily on larger meat-packing houses in Pennsylvania and Indiana.

Virginia's Southeast Dairy Association lists eight milk processing plants in the state, located in Mount Crawford, Lynchburg, Springfield, Newport News, Richmond, Winchester, Rural Retreat, and Wirtz. Some regional farms head to closer processors in Maryland. Specialty processors also manufacture dried milk and other commodities derived from milk for use by the food industry. Cool Lawn Dairy in Remington has tapped solid markets for creamline milk and its own ice cream, processed in Pennsylvania and sold in supermarkets in a multistate region, while also available from Moo'Thru, the farm's own drive-in dairy shop on Route 29. Owner Ken Smith points out that his entire approach to farming has shifted over the past 20 years: he has increased production, become a technological innovator, and managed both sales and farm production. As a result, he says, he is enjoying himself more, and making more money. He hires a larger staff to run a stronger business than he had as a stand-alone farm, one he hopes to pass along to a younger generation. "We have to go to volume because the margins are so low," he concludes.



Cool Lawn Dairy owner Ken Smith says that by expanding his operation to a larger scale, and by selling direct to consumers at his retail outlet MooThru, he is enjoying himself more and making more money than when he simply ran a family farm. Photo © Ken Meter, 2015.

Emerging farms

While larger farms pursue the essential strategy of ramping up production to overcome low margins, several small farms have been launched with a different perspective in mind. These farmers have found rewarding trade at a smaller scale, and focused on nearby customers.



Francis Ngoh raises mushrooms and produce at his Rock Creek farm in Fauquier County. Photo © Ken Meter, 2015

Francis Ngoh, who once worked as an engineer for a telecommunications firm in Vienna, Virginia, moved to Fauquier County several years ago because "the infrastructure we needed was here." Through a spontaneous process of discovery, he found he could raise mushrooms in the tree branches he had cleared from his property as he opened new fields for farming. He readily found eager buyers at Whole Foods (who sought him out) and the Inn at Little Washington. "If you are well organized," he adds, "the market comes to you." He has expanded into growing peppers, garlic, potatoes, chard, beets, and onions, and is now contemplating selling directly to household consumers. He now collaborates with a small group of growers to market a variety of products to DC area residents as well. He sees the challenge for the future as one of building a *culture* that supports local food trade.

Another farm involved in the local trade has set to work restoring pastures, simultaneously restoring an income stream for livestock producers. Wally Hudson, whose career in software

development floundered after the economic recession of 2008, purchased 50 acres, found a friend to invest in his farm, and now rents an additional 50 acres. On this land, he grazes livestock using intensive management practices. He teamed up with his wife Amy, an expert baker, to sell at the Culpeper farmers' market for several seasons, and then they had an opportunity to take over a storefront on historic Davis Street downtown. Now they offer meats and eggs from their own farm and two others nearby, and fresh baked goods, year-round. This combination of products offers flexible sources of income for their business. They caution, however, that currently about half of their business comes from tourists rather than local residents.



Wally Hudson sells meat and eggs from local farms, including his own, along with freshly baked bread handcrafted by his wife Amy, at their downtown Culpeper storefront, Moving Meadows Farm. Photo © Ken Meter, 2015.

All farmers rely heavily upon a steady supply of inputs. David Durr of CFC Cooperative in Culpeper points out that "momentum for local food is building" and adds that the 45,000-

member co-op plays a key role. "Everything we do has to do with local food," he says. Durr adds that while the region is primarily a cattle region, the co-op grinds locally grown grain for all of the feed it sells local farmers, and now offers a line of GMO-free feed. He thinks the land near Culpeper has limited potential for vegetable production, but notes that some promising greenhouse operations have been launched.



CFC Cooperative in Culpeper. Photo © Ken Meter, 2015.

Insights from interviews and economics research

Our economic research (see above for Rappahannock-Rapidan Region data, and see Appendix for data covering the entire Northern Piedmont), combined with these interviews with key leaders, highlighted several critical concerns expressed by local food leaders, and converged on practical recommendations for Rappahannock-Rapidan Region's efforts to strengthen the region's ability to feed itself.

Our interviews showed that despite having a robust complement of food system assets, the notion that the region has become somewhat of a "doughnut hole" is accurate, with many

"local" foods passing through the region on their way to metro markets, but unavailable to local residents. Consumers do express a strong demand for local food, yet they have lower-cost alternatives, so farmers find that actually making a living meeting this demand is proving quite challenging. Even chefs who have been very supportive of local farmers typically do not list the names of these farms on their menus, or in a display at the restaurant. Chefs at Fauquier Hospital and Palladio Restaurant at the Barboursville Winery market their cuisine primarily by claiming a focus on serving "quality" foods, rather than locally sourced.

Indeed, our interviews found that many of the food businesses in the Northern Piedmont that once focused themselves on local food production have trimmed their local operations back in recent years — even as popular interest in purchasing food from local farms appears to be rising.



Chef James Wedderburn says the focus of Fauquier Hospital's food service has moved away from local foods towards an emphasis on "artisanal" foods. Photo © Ken Meter, 2015.

Fauquier Hospital, for example, used to source its beef from a Madison County farm, but determined that the cost of this beef was too high, and has now returned to conventional sources. Further, the hospital food service once prepared food for a local school and a nursing home, but has stopped offering that service in an effort to focus its own energies more closely. Although the kitchen can obtain produce identified by the farm of origin from its Maryland distributor, Hearn Kirkwood, and purchases milk from Marva Maid dairy, its current broadline distributor, Sysco, offers no local food options. While the hospital used to differentiate itself in part on the basis of its interest in local foods, it now builds its identity primarily around "cooking from scratch."

Several food buyers indicated that they had limited interest in purchasing locally raised food items because the price was too high, and the quality was lacking. All agree that the supply of local food at their accustomed prices is insufficient for their needs. Although Culpeper is known for its quality restaurants, the names of local farms are seldom mentioned on menus as sources.

Palladio Restaurant in Barboursville features wine fashioned from its own grapes, buys Virginia milk, features artisanal cheeses from specific farms in Virginia, and offers seafood harvested from the Carolina and Virginia coasts through a Charlottesville distributor. It sources micro greens, wild and cultivated mushrooms, and selected produce items from nearby farms. Still, winemaker Luca Paschina says the restaurant used to purchase high-quality, locally grown meats from a Madison County farm, and was willing to pay a slightly higher price to do so. But that farm folded, he says. They now sources meats from as far away as Montana. The restaurant's web site does not list the names of local farms on its display.

Blue Ridge Produce, an aggregator based at a greenhouse and warehouse complex near the Culpeper airport, was founded two years ago when Mark Seale, the former owner of a retail produce store in Charlottesville that featured farm-identified produce on its shelves, teamed up with DC investor Jim Epstein to create a wholesale business. The firm is proud of its ability to trace each item it carries back to the farm where it was produced, thanks to a custom software platform. Representing some 200 farms in Virginia and nearby states, Blue



Mark Seale of Blue Ridge Produce sources food from Eastern Seaboard farms into the Washington, DC market. Photo © Ken Meter, 2015.

Ridge sells to Eastern Seaboard grocers such as Wal-Mart, Sysco, U.S. Foods, Whole Foods, Wegmans, Harris-Teeter, and Ahold. However, it is not clear that the identity of the farm where each produce item was raised is known to the ultimate consumer.. While Blue Ridge has begun selling to school districts in other parts of Virginia, it is not strongly focused on selling farm-identified produce within the Northern Piedmont. Significantly, Seale says, "We have not found supply to be a problem." He says the firm has launched its business by working with larger growers and has not yet reached out to small and mid-size growers. In just two years, he adds, the firm has passed its break-even point of \$3.5 million in sales. "We will sell anywhere," Seale adds. "My job is to move every single thing my growers have."

Waterpenny Farms near Sperryville sells hundreds of thousands of dollars of produce to its farmers' market customers, CSA members, and to local restaurants, but adds that metro DC farmers' markets have proven the most lucrative. Owner Eric Plaksin says the farm has reached the scale it wishes to attain. Growing to larger scale to meet wholesale demand at lower prices would not strengthen the farm business, in his view.



Eric Plaksin of Waterpenny Farms near Sperryville has grown the farm to a scale that suits the family. Photo © Ken Meter, 2015.



Clay Jackson of Senterfitt Farms in Madison County. Photo © Ken Meter, 2015.

Senterfitt Farms in Madison County, raising about 400 cattle on several scattered pastures totaling about 1,000 acres, appears to earn a similar amount of money selling its own livestock, but is also networked with a group of farmers who sell through firm headquartered in Colorado. Clay Jackson of Senterfitt says he raises yearlings and cow-calf pairs that are shipped to farms in Iowa, Kansas, Oklahoma, Texas, New York, and Pennsylvania for finishing under an antibiotic-free regimen. This marketing cluster, he says, attains multimillion dollar sales. With this marketing reach, Jackson says he works with several growers nearby to help them expand production and raise their incomes. He likes to focus his efforts on younger farmers.

This team also works with Wegmans supermarket to feature a "Virginia Grown" product line (involving the meat from about 60 cattle per year) that is highlighted in a separate cooler in the grocer's meat department. Yet while the animals may live part of their lives in Virginia, they are finished elsewhere, and their meat is processed in Indiana or New York State, and

sold at the Wegmans retail counters with no specific mention of which farm raised the cattle. It is difficult, then, to know how much of the value of each animal accrues to the region itself. Jackson says that the volume of meat required to feed Northern Piedmont residents is too small to attract his business' attention, especially given the ability of nearby farms such as Rider's Farm to sell to local markets: "We don't sell anything locally."

Yet perhaps the most telling example is the farm at Graves Mountain Lodge. A historic stagecoach stop nestled at the base of the Blue Ridge, this multi-generation farm, restaurant, and lodge is actually seeing its local food offering dwindle over time. Owner Jimmy Graves, whose family has lived in the same valley since the 1740s, and who is dedicated to sourcing foods locally, laments that the Lodge until recently cured its own Virginia hams, but abandoned the practice after the burdens of food safety inspection proved too cumbersome and costly. "It got to where every time we wanted to move a ham from one building to another we had to call in the inspector," Graves says. While the operation met USDA standards, county inspectors created barriers, he adds.



Jimmy Graves finds his options narrowing for offering local food to his guests at Graves Mountain Lodge in Madison County. Photo © Ken Meter, 2015.

The Lodge once sold tree-ripened peaches to local grocers, but now limits itself to on-farm sales because the ripe peaches do not suit the longer supply chains that have developed in recent years, and because it is too difficult to find labor to harvest and pack the peaches. The farm similarly abandoned commercial sweet corn production because it lost too much of its crop to bears. Still, the Lodge does run its own cannery, pressing a high-quality cider, cooking its own applesauce, apple butter, and fruit preserves or chutneys, and freezing its own apples for later use as baked apples. Graves sells the farm's apples to the Madison County schools, but is finding that as apple prices rise — in part due to increased labor costs for washing and packing — he has less and less room to compete with apples shipped in from Washington State. To create new opportunities, he explored collaborating with other apple growers in the region to create an apple-processing center south of Charlottesville, but the growers ultimately decided not to construct the facility.

Graves Mountain Lodge nevertheless sources food as locally as possible, but has found these sources to be inadequate. The Lodge raises some of its own lettuce and tomatoes, but cannot supply all of its own demand. "Local farmers simply cannot supply enough," Graves says. "No one at all is raising produce in this valley." He thinks there are additional markets in Madison County that could be tapped by selling direct to customers. When possible, he purchases produce through the Mennonite auction barn in Dayton (where the Lodge also sells its fruit products). Meats are trucked in by his wholesaler, U.S. Foods. "We need as many as 200 pounds of rib eyes per night," he adds. No local farm has that kind of output, he adds, and besides, when you raise the animal yourself (as the Lodge used to do) or buy from a local farm, you have to use the whole animal — you don't get simply rib eye steaks. Graves does order trout from Alleghany County, Virginia, and buys turkeys from the Shenandoah Valley.

In summary, the situation regarding local food in the Rappahannock-Rapidan Region is somewhat divided by prevailing food infrastructure. The marketing channels that are easy to reach involve long-distance transport of low-margin commodity foods sold over long distances, while the few farmers that have dedicated themselves to addressing the emerging demand for local food have found reliable niche markets, but report significant difficulty in (or lack of interest in) reaching larger markets since supportive infrastructure does not exist.

Left to market forces alone, the Northern Piedmont region would continue to focus on growing food in large quantities at low margins for wholesale markets, with the food from its farms being shipped to distant urban centers.

If its residents' dreams of having access to local food are to be realized, the region will require the construction of supportive infrastructure that creates local efficiencies in food trade, and that makes local food trade a more favored outcome. This, then, is the work that the Rappahannock-Rapidan Region may elect to tackle over the next few decades.



Visitors to Moving Meadows Farm store in Culpeper can have grain ground fresh to order at this mill. Photo © Ken Meter, 2015.

Key conclusions of our economic research and interviews

- 1. The primary source of income for Northern Piedmont farmers is selling nursery and ornamental crops, which account for nearly \$90 million of cash receipts (in the broadly defined region of 13 counties and seven cities in Central Virginia listed in the data report in the Appendix). This is more than one of every four dollars earned by the region's farmers. Yet this crop focus also creates a dilemma for Northern Piedmont farmers: to some extent their livelihood depends on suburban expansion and its requirements for landscaping and ornamental crops, which in turn takes farmland out of production, and raises land costs for the remaining farmers. This suggests that considerable land could be made available for raising food for the region's consumers without reducing current food production by shifting land away from ornamentals toward food crops. Northern Piedmont farms are far more likely to gain protection in the long term if they are dedicated to feeding residents of the region.
- 2. The 7,566 farms that operate in the broader Northern Piedmont region have spent an average of \$110 million more to produce crops and livestock each year than they have earned by selling these products. This is an average net cash loss of \$14,540 per farm over a twenty-five year period. This means farm production has engendered a \$2.7 billion loss over the last quarter century. Seventy-two percent of the region's farms reported a net loss in 2012, and farmers have reported net gains in only three of the past 25 years. Overall, Northern Piedmont farmers earned \$273 million less by selling commodities in 2013 than they earned in 1969 (in 2013 dollars). This means that without off-farm sources of income, few of the region's farmers would be able to continue to farm. Further, it suggests the regional economy has little to lose by shifting to new forms of food production serving local markets. Accordingly, it is not surprising that most of these farm start-ups also require financial support from external sources.
- 3. Curiously for a farm region, more than 90% of the food that is consumed in the Northern Piedmont is produced outside of the area, so consumers spend nearly \$7

billion each year purchasing food sourced outside. Growing and processing food for local consumers therefore represents significant economic opportunity for the region if these dollars can be repatriated.

4. Prevailing infrastructure supports two different approaches to farming in the Northern Piedmont. These are not totally separate but operate under fundamentally different logics: (a) export-oriented food enterprises focus on selling large quantities of food commodities long distances at low margins, while (b) local food enterprises feature direct sales from farmers and processors to the ultimate consumer. The strength of the first approach is based upon growing large volumes and selling to large buyers; the test of success is often considered whether farmers earn income. The strength of the second approach is to foster new community networks, and to establish commercial trade that is based upon personal relationships of trust. Success in this paradigm is often considered the strength of local economic multipliers, whether farmers build lasting wealth, and whether consumers know precisely who grew and processed the foods they eat.

Neither model, by itself, is sufficient to build a strong local food economy in the Northern Piedmont. One will perpetuate the region's historic focus on feeding others, which over the long term has proven corrosive to wealth creation by farms; one is likely to be robust as long as wealthier consumers are supplied, but will not in itself raise quality food for the 15% of North Piedmont consumers who are low-income, nor will it serve as the main source of food for residents of the region. New approaches must continue to be devised, and new infrastructure is required to create local efficiencies.

These two approaches share considerable common logic: both depend heavily upon establishing relationships of trust among strong social and commercial networks. Both depend heavily upon transparent information flow within their respective circles. Each trades in similar food items, and each depends largely on tapping denser populations of metro consumers with higher incomes.

Yet one paradigm depends largely on building political influence and pleasing external investors. Information is closely held within limited circles. This approach suggests that the

primary role that rural communities should play is to feed consumers in metropolitan regions of the U.S. The other paradigm places a higher priority on transparency among residents of the region, suggests that an agricultural region must feed itself before feeding others, and maintains that community building is intrinsic to economic development.

There is little the Rappahannock-Rapidan Region can do to advance the growth of an export-based agriculture, because existing infrastructure is already established to accomplish this purpose, and this is a relatively easy task if assumed by people of means. What the region can more clearly influence is the creation of infrastructure that builds consumer interest in buying local foods, creates efficiencies in local food trade, and allows emerging farmers to make a better livelihood serving local markets. This is a more difficult, long-term strategy, but with Rappahannock-Rapidan Region restaurateurs and grocers reporting that residents are deeply interested in obtaining food from local farms it is the strategy that will reap the greatest long-term rewards for the region. Part of the focus of this work will be to encourage local consumers who say they wish to have stronger local food options to generate a deeper commitment to purchasing from local farms, and insisting that local food vendors source locally.

Core conditions and obstacles

- 1. The primary obstacle to growth of the local food sector in the Rappahannock-Rapidan Region, farmers said, is lack of labor. This is a shortcoming in a variety of ways. At the core, few young people who live in the region are interested in working farm jobs. Only some of these have the requisite skills. Even fewer are able to work strenuously enough to suit the competitive demands of a low-margin industry such as food production. In addition, even migrant labor, which in general is trained in agriculture and highly productive, is not easy to come by as long as the border is restricted.
- 2. The next most important shortcoming noted by our sources is a lack of farmers. This is usually discussed merely as a concern for the lack of supply of local food to meet local demand, but in actuality the issue is far deeper: agriculture is not regenerating itself in the Rappahannock-Rapidan Region because financial conditions frustrate this goal. Few young farmers can afford to take over their family's established operations. The emerging farmers we interviewed who have been able to start operations of their own tend to be people who made enough money in technical and professional careers that they could venture into farming with savings of their own to help cover land and operational costs, perhaps with the help of investment from an inheritance, a favorable friend, or relative. This is a path available only to a select few, and while important for growing healthy foods, does not in itself create widespread opportunity.
- **3.** As indicated above, **local food will not flourish without supportive infrastructure.** In many cases, what is most needed is farm-level infrastructure, ideally serving a number of farms that cluster together in one area, perhaps through the intentional development of a group of complementary farms, or as a result of an incubator farm creating a lasting cluster of growers who agree to work collaboratively over time, and to bring in new members on an ongoing basis. One example of this is the Food Production Node concept put forward in the State of South Carolina (see Recommendation 3, below).

- 4. The tangible facility most commonly requested by our sources was some sort of community kitchen that would allow value to be added to foods that are produced locally. This might mean freezing fresh fruits and vegetables during harvest season for later use, or it might mean processing "second" quality vegetables into prepared foods for use by schools, hospitals, or other institutions. Chefs noted a need for canned legumes, processed tomato products (such as canned tomatoes and sauces), frozen corn, sweet peas, and potatoes, and other market opportunities certainly exist. Some might wish to rent such a kitchen to create a specially branded product made of local ingredients, such as salsa. Many community kitchens are also hired out by chefs to make tomato sauces for use in the offseason, or to freeze a year's supply of, say, sweet corn or fruits.
- 5. Our interviews showed that creating a new "food hub" in the Rappahannock-Rapidan Region is not appropriate at this time. Although several of our sources identified a strong need for an aggregation and distribution facility for produce, the economics of providing this service may be daunting. Smaller steps toward aggregation are most appropriate at this time, leading to eventual construction of a physical facility, unless a clear source of long-term financial support can readily be identified.

Leaders of the Local Food Hub in Charlottesville pointed out that after five years of nonprofit operation, in which sales have increased steadily from \$200,000 per year to \$1.2 million, the hub still requires up to \$500,000 in donations each year, and may require four to seven years to become self-sufficient. The hub sources foods from 60 farms within 150 miles of its warehouse, and ships as far away as Washington, DC, but notes that six farms raise most of the produce traded through the hub. "Even the largest of the farms we work with is too small to sell to a larger buyer like Sysco," says Executive Director Kristen Suokko.

Simply put, any food hub is required to perform multiple tasks that are not income producing: identifying buyers, identifying growers, working with buyers and growers to ensure products are grown to suit buyers' needs and that buyers treat farmers well, training growers in meeting food safety standards, maintaining transparency, offering broader community outreach, and so forth. Suokko added that if she were to launch such a food hub

again, she would suggest that the sponsoring organization or business have \$1 million in the bank to cover startup costs, including surprise events. Some experts say that a food hub under the USDA definition (that is, one that includes all three components of aggregation, processing, and distribution) would have to mount sales of \$1.5 to \$5 million to attain self-sufficiency. For an excellent review of some of the contingencies that would have to be met in order to create a sustainable food hub business, see Iowa banker Shane Tiernan's excellent report at http://www.crcworks.org/tiernan.pdf. This is not exhaustive, but is a useful resource for food hub planning.

Interestingly, having begun its quest by working with growers to scale up, the Local Food Hub is now exploring direct sales as the most robust potential income opportunity. The food hub currently works with several processors, but also has considered adding a processing capacity.

- 6. For the most part, livestock slaughtering and processing was not viewed as a primary concern by either farmers or food buyers, although some farmers noted that local processing options were too sparse, and that certain plants should offer higher quality service when cutting meats. Overall, more pressing issues require the region's attention, such as the priorities outlined in this report, but in the long term some mid-sized processing may be appropriate. Most every farmer would ideally like to have a processing facility a short drive away, but the cost of developing a state-of-the-art regional processing facility that would be competitive in the wider marketplace might require as much as a \$10-million investment, and is likely to undermine the existing business of processors who are already operating in the Northern Piedmont region. For further information, see the South Carolina \$9.85-million investment plan for local foods, "Making Small Farms into Big Business," available for free at http://www.crcworks.org/scfood.pdf, and read the appendix covering meat processing options.
- 7. Local food will require its own promotion on many levels. In particular, the definition of "local" food is becoming elusive enough that RRRC and other regional food leaders will need to take steps to preserve the integrity of local food trade. In come cases, as noted above, food that has traveled more than 2,000 miles is considered "local." Given that the supply of food grown inside the region for local customers is so limited,

many food traders have adopted the strategy of defining "local" to be whatever products are the easiest to find, not what is truly raised and processed in the region.

Other concerns raised by local sources

Our sources also noted several other challenges to the growth of local food trade in the Rappahannock-Rapidan Region. These are all issues that might be taken up in the course of addressing the priorities listed above:

- Local consumers are used to buying food at relatively low prices, and this often encourages farmers to head to more lucrative markets in Washington, DC.
- Land prices can prove prohibitive, especially for a younger new farmer.
- Business taxes take a severe toll, especially on new businesses that are dependent on capital equipment.
- County and state food safety policies and enforcement are considered cumbersome by many farmers and processors.



Kristen Suokko at the office of the Local Food Hub in Charlottesville. Photo © Ken Meter, 2015.

Key Recommendations for the Rappahannock-Rapidan Region

While playing its critical role by convening diverse stakeholders and helping to coordinate regional development activity, RRRC and its local government members hold considerable power to strengthen local foods activity in the region. RRRC can take the lead in fostering planning initiatives, and can also monitor the resulting activity to make sure it fulfills the vision that has been set by local residents. Its stance as a coordinating body across the region means it can convene local governing bodies and other stakeholders to ensure that work is both cogent and well coordinated across the region, and throughout different programs.

The following recommendations are numbered in accord with the findings listed above:

- 1. The Rappahannock-Rapidan Region should address the shortage of farm labor by investing in concerted training efforts. First of all, the region's schools should ensure that every high school graduate holds basic skills in farming, gardening, food preparation, and food safety. To support this initiative, steps should be taken to ensure that farm labor is more rewarding financially. Beyond that, more advanced courses should be offered at technical colleges, community colleges, community based farmer training programs, and universities. Such training will encourage farm entrepreneurship, but will also train those who do not wish to manage a farm, but prefer to play a more limited role.
- 2. The Rappahannock-Rapidan Region should foster the creation of new initiatives to grow new farmers that are ongoing and holistic, not simply stand-alone training programs: they must address the needs of farmers to have supportive infrastructure (for example, for a produce farmer, washing facilities, packing sheds, storage, cooler, and distribution facilities) that would make trading food locally more efficient. Simply training farmers and then asking them to compete without such a fabric of support is to invite emerging farmers to fail. Similarly, these emerging farmers must be able to build marketing power by negotiating with independent buyers who have some stake in the local community, and aggregating their products with others. Otherwise, the pattern is for farmers to find their

buyers whittling prices down to levels that will not sustain the farm operation. Growing new farmers on an ongoing basis, too, should become a long-term initiative for the entire Rappahannock-Rapidan Region.

3. The Rappahannock-Rapidan Region should coordinate efforts to build appropriate local foods infrastructure across the region, beginning at the farm level.

Local foods will only flourish if local efficiencies are created through supportive infrastructure. The Rappahannock-Rapidan Region would seem like an ideal place to develop season-extension facilities such as hoophouses and greenhouses heated with renewable energy, combined with packing, storage, and distribution areas that could produce and prepare food for local consumers. Other necessary infrastructure will be databases that help local farms connect with local buyers, regular convenings that allow farmers, food buyers, and related organizations to build a common vision and concrete forms of collaboration over time, and supportive food safety and tax policy.

In particular, if physical infrastructure is built close to farms, this will give new options for farmers as they prepare for local markets. Farms might well cluster around a small-scale washing, packing, and storage facility that could be used by several growers; this could bot make it more efficient for growers to prepare smaller quantities of food for their neighbors, as well as to aggregate products together for wholesale or institutional buyers. Working with a common facility should also encourage new forms of collaboration. For an example of such farm-level infrastructure, see the South Carolina \$9.85-milion investment plan for local foods, "Making Small Farms into Big Business," at http://www.crcworks.org/scfood.pdf, especially Appendix D and sections covering Farm Production Nodes. Other specific infrastructure investments are also noted below.

4. The Rappahannock-Rapidan Region should support ongoing efforts to build a community-use processing kitchen. Culpeper County is already engaged in a new opportunity to make use of the former Carver School site, with its established commercial kitchen, for use as a community kitchen/processing center. Financing such an operation can be a challenge, and the project may require ongoing support for a number of years. Still, the importance of having a facility in the region that allows local people to make their own

decisions about what foods to process out of local ingredients is quite substantial. Clemson University has also devised a modular, inexpensive processing kitchen template called the "Crop Stop."²

5. The Rappahannock-Rapidan Region will want to continue to foster coordination of local foods activities across its region. Hiring staff who can ensure that diverse stakeholders remain in communication with each other and have opportunities to collaborate will be important. Hosting frequent convenings of local foods leaders, mounting collaborative projects, and offering small grant opportunities so that innovative ideas can be tested is a good combination of activity. The Region should also explore creating a food production node in Culpeper, and later in other places, to complement the work of the Local Food Hub in Charlottesville.

To coordinate local foods activity, The Rappahannock-Rapidan Region should explore hiring (or facilitating the hiring of) at least one local foods coordinator for the region. This staffperson would assume the responsibility for building stronger connections among farmers, food buyers, consumers, and food-related organizations in the region, building a strong network of local foods activity, rather than focused on building an aggregation point as a physical entity. Intentional clustering of local foods businesses, so they work in complementary ways to fulfill a regional vision rather than competing with each other to serve external markets, will prove critical. Such a coordinator, for example, might work with a hospital that seeks frozen fresh produce from local farms, contracting with growers who can raise the crops, and a processor (such as the Carver School community kitchen) that can freeze the product and ship it to the hospital, through a deliberate collaboration. When this coordination, and deal flow, become sufficient that an aggregation point is sustainable, then it might be worth considering the creation of an additional food hub. Indeed, in the course of one week's worth of interviews, we were able to inform three food buyers of local food sources they were unaware of — which suggests the need for greater coordination is acute.

 $^{^2\} http://newsstand.clemson.edu/mediarelations/extension-offers-fresh-opportunity-for-farmers-at-the-crop-stop/$

It should be noted, however, that two Northern Piedmont counties, Fauquier and Rappahannock, have separately hired local food system coordinators with mixed success; The Rappahannock-Rapidan Region should determine what conditions would be required to ensure that such a regional position can play an effective role and be sustained over time. If effective coordination is already being accomplished by a network of local food leaders, it may be most appropriate to fund the strengthening of that network as a priority over staffing one position.

As the network of local food leaders strengthens and expands, RRRC and its local partners may wish to build a formal organization to coordinate local foods strategies. This might take the form of a community of practice, a local foods coalition, or a food policy council. As this work gains strength, the Rappahannock-Rapidan Region should also explore specific local and regional policies that might be adopted to strengthen local foods activity.

6. No action need be taken by the Rappahannock-Rapidan Region with regard to meat processing at this time, although RRRC may wish to convene livestock farmers and processors to address specific meat-processing quality concerns that were raised in our interviews.

7. The Rappahannock-Rapidan Region should also foster marketing campaigns that promote a variety of goals:

- (a) Consumers should be encouraged to purchase locally raised foods.
- (b) Consumers should be informed about which local foods are available seasonally.
- (c) Local food business clusters must be promoted.
- (d) Local food collaborations must be promoted.
- (e) Specific farms, food products, and businesses should be promoted.
- (f) The integrity of "local" must be maintained.

Each of these is fairly self-explanatory, except for the final recommendation regarding integrity. To ensure high integrity of the word "local," the Rappahannock-Rapidan Region should work with local restaurants, retailers, wholesalers, and farmers to make sure that products marketed as "local" carry clear information identifying the farm where each item

was produced, and any processing plants or intermediaries that handled the food. Without this protection, the Rappahannock-Rapidan Region runs the risk of losing consumer trust in the integrity of food that is labeled local. This might be accomplished by working with local distributors to print labels for produce, meat, or processed foods case lots that clearly and accurately identify the farm where the food item was originally grown, as well as any processors that added value to each product. Rappahannock-Rapidan partners could meet with local food handlers to encourage them to identify to customers the sources of the foods they handle, and could offer incentives such as paying for printing of promotional materials, or defraying extra costs distributors may take on by creating more detailed labels. The national Buy Fresh Buy Local campaign (coordinated in the Rappahannock-Rapidan Region by Piedmont Environmental Council) is also developing materials that will eventually be available to groups who wish to run such campaigns.



Appendix: Northern Piedmont Region Farm & Food Economy

Northern Piedmont of Virginia Regional Farm & Food Economy

by Ken Meter, Crossroads Resource Center (Minneapolis)³ for

Rappahannock Rapidan Regional Commission Culpeper County

December 1, 2014

Covers Albemarle, Arlington, Culpeper, Fairfax, Fauquier, Greene, Loudon, Louisa, Madison, Orange, Rappahannock, Spotsylvania, & Stafford Counties and City of Alexandria, Charlottesville, City of Fairfax, Falls Church, Fredericksburg, Manassas, & Manassas Park in Virginia

Northern Piedmont Region (Bureau of Economic Analysis, 2013)

3,057,762 residents receive \$189 billion of income annually. Personal income more than quadrupled from 1969 to 2013, after dollars were adjusted for inflation. The largest source of personal income is capital income (from interest, rent or dividends), at \$37 billion. Government workers rank second, with \$31 billion of personal income. The third most important income sources are transfer payments (from government programs such as pensions), which account for \$13 billion [see below]. Construction jobs bring in \$7 billion. Note that income from public sources makes up 24% of the region's personal income.

Income earned from transfer payments includes \$5.1 billion of retirement and disability insurance benefits; \$4.9 billion of medical benefits; \$1.1 billion of income maintenance benefits; \$223 million of unemployment insurance; and \$895 billion of veterans' benefits.

Government income includes \$14 billion of income earned by federal workers and \$12 billion earned by state and local government workers. Military personnel earn \$3.5 billion of personal income.

Although population has nearly tripled since 1969, there has been only limited public planning to assure a secure and stable food supply.

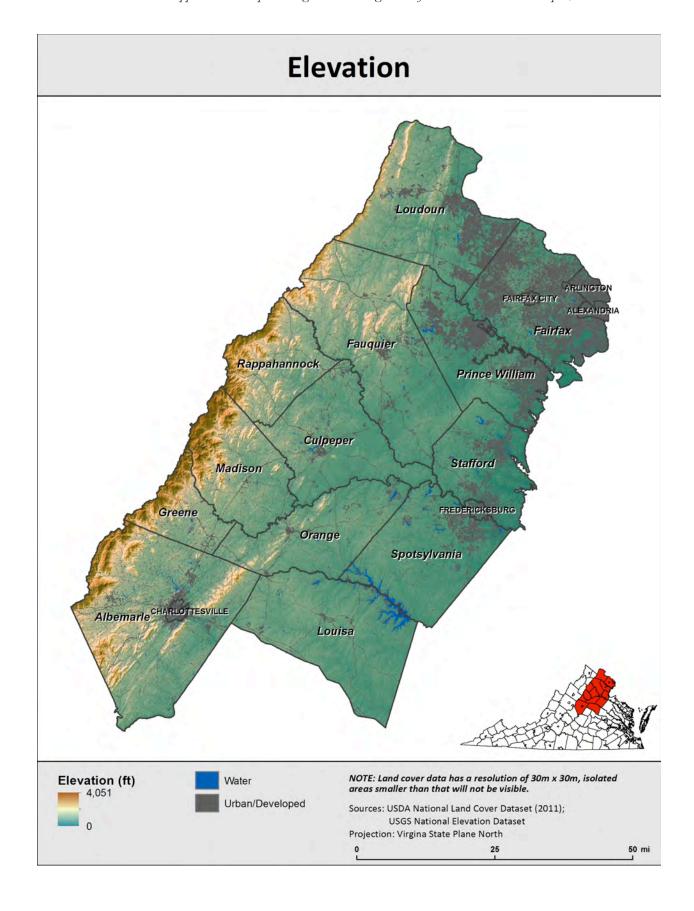
³ Considerable research assistance provided by Nick Wojciak.

Population of the Northern Piedmont Region by Geography (Bureau of Economic Analysis, 2013)

Arlington County	224,906
Culpeper County	48,506
Fauquier County	67,207
Greene County	18,804
Loudoun County	349,679
Louisa County	33,945
Madison County	13,200
Orange County	34,689
Rappahannock County	7,478
Stafford County	136,788
Alexandria (Independent City)	148,892
Albemarle County + Charlottesville	147,349
Fairfax County, Fairfax City + Falls Church	1,168,405
Prince William County, Manassas + Manassas Park	496,434
Spotsylvania County + Fredericksburg	155,480

Per Capita Income of the Northern Virginia Piedmont Region by County (Bureau of Economic Analysis, 2013)

	Dollars
Arlington County	82,736
Culpeper County	37,943
Fauquier County	56,814
Greene County	42,112
Loudoun County	59,729
Louisa County	45,808
Madison County	40,197
Orange County	38,149
Rappahannock County	49,002
Stafford County	44,378
Alexandria (Independent City)	81,078
Albemarle County + Charlottesville	52,693
Fairfax County, Fairfax City + Falls Church	71,752
Prince William County, Manassas + Manassas Park	45,760
Spotsylvania County + Fredericksburg	42,593
Northern Virginia Piedmont Region	61,866



Issues affecting low-income residents of the Northern Piedmont region:

Over 429,000 residents (15%) earn less than 185% of federal poverty guidelines. At this level of income, children qualify for free or reduced-price lunch at school. These lower-income residents spend \$900 million each year buying food, including \$106 million of SNAP benefits (formerly known as food stamps) and additional WIC coupons. The region's 7,566 farmers receive an annual combined total of \$10 million in subsidies (14-year average, 2001-2013), mostly to raise crops such as corn or soybeans that are sold as commodities, not to feed local residents. Data from Federal Census of 2008-2012, Bureau of Labor Statistics, & Bureau of Economic Analysis.

3.5% percent of the region's households (more than 82,000 residents) earn less than \$10,000 per year. *Source: Federal Census of 2007-2011.*

16% of adults aged 18-64 in the Northern Piedmont region carried no health insurance in 2012. *Source: Centers for Disease Control.*

Food-related health conditions:

26% of Northern Piedmont Region residents reported in 2011 that they eat at least five servings of fruits and vegetables each day. 74% do not. This is a key indicator of health, since proper fruit and vegetable consumption has been connected to better health outcomes. *Source: Centers for Disease Control.*

26% of Northern Piedmont Region residents reported in 2009 that they participated in enough aerobic and muscle-strengthening exercises to meet guidelines. *Source: Centers for Disease Control.*

8.7% of Northern Piedmont Region residents have been diagnosed with diabetes as of 2012. *Source: Centers for Disease Control.* Medical costs for treating diabetes and related conditions in the state of Virginia total \$6 billion. *Source: American Diabetes Association.*

61% of the region's residents are overweight (37%) or obese (24%) as of 2012. Source: Centers for Disease Control.

The region's farms (Census of Agriculture, 2012)

Agriculture Census data for 2012 were released May 2, 2014.

The Census of Agriculture defines a "farm" as "an operation that produces, or would normally produce and sell, \$1,000 or more of agricultural products per year."

Land:

- 7,566 farms. This is 16% of Virginia farms.
- The Northern Piedmont region had 8 fewer farms in 2012 than in 2007.
- 191 (3%) of the region's farms are 1,000 acres or more in size.
- 3,788 (50%) farms are less than 50 acres.

- Average farm size is 151 acres, less than the state average of 180 acres.
- The region has 1.1 million acres of land in farms.
- This amounts to 14% of the state's farmland.
- The Northern Piedmont region holds at least 362,000 acres of harvested cropland. Note that data for harvested cropland in Arlington County were suppressed by the USDA in an effort to protect confidentiality, so this total is incomplete.
- At least 5,291 of these acres are irrigated. Note that data for irrigated cropland in Arlington County were suppressed by the USDA in an effort to protect confidentiality, so this total is incomplete.
- Average value of land and buildings per farm was \$68,000. This was less than the 2012 state average of \$73,000.

Sales:

With the exception of foods sold directly to consumers (see below), farmers typically sell commodities to wholesalers, brokers or manufacturers that require further processing or handling to become consumer items. The word "commodities" is used in this report to mean the crops and livestock sold by farmers through these wholesale channels. The term "products" encompasses commodity sales, direct sales, and any other sales.

- The region's farmers sold \$347 million of crops and livestock in 2012.
- Farm product sales increased by 24% from 2007 to 2012. This was in part fueled by higher grain prices that have since returned to lower levels.
- At least \$196 million of crops were sold. Note that data for sales of crops in Arlington County were suppressed by the USDA in an effort to protect confidentiality, so this total is incomplete.
- More than \$152 million of livestock and their products were sold. Note that data for sales of livestock and their products in Arlington County were suppressed by the USDA in an effort to protect confidentiality, so this total is incomplete.
- 5,107 (67%) of the region's farms sold less than \$10,000 of products in 2012.
- Total sales from these small farms were at least \$12 million, more than 3% of the region's farm product sales. Note that data for sales by small farms in Arlington and Rappahannock counties were suppressed by the USDA in an effort to protect confidentiality, so this total and percentage are incomplete.
- 428 (6%) of the region's farms sold more than \$100,000 of products.
- Total sales from these larger farms were at least \$266 million, more than 77% of the region's farm product sales. Note that data for sales of large farms in Fairfax, Prince William, Rappahannock, and Stafford counties were suppressed by the USDA in an effort to protect confidentiality, so this total and percentage are incomplete.
- 72% of the region's farms (5,431 of 7,566) reported net losses in 2012. This is more than the Virginia average of 62%.

• 939 (12%) of Northern Piedmont region's farmers collected a combined total of \$5.9 million of federal subsidies in 2012.

Top farm products of the Northern Piedmont region (2012)

Note: * denotes sales data has been suppressed.

Product	\$ Millions
Ornamentals	*87
Cattle and calves	79
Milk	*31
Corn	*30
Soybeans	*28
Forage Crops (hay, etc.)	20
Fruits and tree nut	*18
Poultry and eggs	*12
Horses	11

Production Expenses:

- Hired farm labor was the largest single expense for Northern Piedmont region farmers in 2012, totaling \$88 million (19% of production expenses).
- Feed purchases ranked as the second most important expense, at over \$71 million (16%). Note that data for feed purchases in Arlington were suppressed by the USDA in an effort to protect confidentiality, so this total and percentage are incomplete.
- Northern Piedmont region farmers charged at least \$45 million to depreciation expenses (10%). Note that data for depreciation expenses in Arlington County were suppressed by the USDA in an effort to protect confidentiality, so this total and percentage are incomplete.
- Repairs, supplies, and maintenance cost Northern Piedmont region farmers \$35 million (8%).
- Property tax expenses were \$29 million (6%).
- Fertilizer, lime, and soil conditioner costs totaled at least \$28 million (6%). Note that data for fertilizer, lime, and soil conditioner expenses in Arlington County were suppressed by the USDA in an effort to protect confidentiality, so this total and percentage are incomplete.
- Gasoline, fuels, and oil purchases were \$27 million (6%).
- Interest expenses totaled \$23 million (5%).
- Livestock and poultry purchases totaled \$20 million (4%).

Cattle & Dairy:

- 3,111 farms hold an inventory of 214,000 cattle.
- 101,000 cattle were sold by farmers in 2012 for total sales of \$79 million.
- 2,549 farms raise beef cows.

- 164 farms raise milk cows.
- 139 farms produced corn for silage.
- 3,623 farms produced 233,000 tons of forage crops (hay, etc.) on 452,000 acres.
- 1,965 farms sold \$20 million of forage.

Other Livestock & Animal Products:

- 261 farms hold an inventory of 4,695 hogs and pigs.
- 187 farms sold at least 5,391 hogs and pigs in 2012. Note that data for pigs sold in Prince William County were suppressed by the USDA in an effort to protect confidentiality, so this total is incomplete.
- 440 farms hold an inventory of 11,000 sheep and lambs.
- 469 farms sold \$1.9 million worth of sheep, goats, and lambs in 2012.
- 1,308 farms hold an inventory of 39,000 laying hens.
- 99 farms raise broiler chickens.
- 4 farms engage in aquaculture.
- 775 farms raise horses and ponies.

Grains, Oil Seeds, & Edible Beans:

- 425 farms produced \$64 million of grains, oil seeds, and edible beans.
- 313 farms produced more than 4.8 million bushels of corn on over 43,000 acres, worth at least \$30 million. Note that data for acreage and bushels of corn in Greene County, and data for sales of corn in Greene and Rappahannock counties were suppressed by the USDA in an effort to protect confidentiality, so these totals are incomplete.
- 216 farms produced more than 2.2 million bushels of soybeans on over 51,000 acres, worth at least \$28 million. Note that data for bushels, acreage, and sales of soybeans in Fairfax, Greene, and Rappahannock counties were suppressed by the USDA in an effort to protect confidentiality, so these totals are incomplete.
- The total value of corn and soybeans sold amounted to at least 17% of all farm product sales in 2012. Note that data for sales of corn and soybeans in Fairfax, Green, and Rappahannock counties were suppressed by the USDA in an effort to protect confidentiality, so this percentage is incomplete.
- 114 farms produced over 643,000 bushels of wheat on more than 10,000 acres, worth at least \$3.5 million. Note that data for acreage of wheat in Albemarle and Rappahannock counties, data for bushels of wheat in Albemarle, Prince William, Rappahannock, and Stafford counties, and data for sales of wheat in Albemarle, Culpeper, Prince William, Rappahannock, and Stafford counties were suppressed by the USDA in an effort to protect confidentiality, so these totals are incomplete.

Vegetables & Melons (some farmers state that Ag Census data does not fully represent vegetable production):

- 224 farms worked 983 acres to produce vegetables, worth at least \$4.7 million. Note that data for sales of vegetables in Greene and Stafford counties were suppressed by the USDA in an effort to protect confidentiality, so this total is incomplete.
- This represents a 29% increase in the number of farms (from 224).
- 140 farms raised potatoes.

Fruits (some farmers state that Ag Census data does not fully represent fruit production):

- 396 farms in the region hold 4,962 acres of orchards.
- 369 farms sold at least \$18 million of fruits, nuts, and berries. Note that data for sales of fruits, nuts, and berries in Greene, Prince William, and Stafford counties were suppressed by the USDA in an effort to protect confidentiality, so this total is incomplete.

Nursery & Greenhouse Plants:

- 313 farms sold at least \$87 million worth of ornamentals in 2012. Note that data for sales of ornamentals in Arlington County were suppressed by the USDA in an effort to protect confidentiality, so this total is incomplete.
- This represents an increase of 29% in the number of farms (from 242).
- 112 farms sold Christmas trees.

Direct & Organic Sales:

- 820 farms sold at least \$5.6 million of food products directly to consumers. This is a 28% increase of number of farms (642 in 2007) selling direct. Note that data for direct sales in Arlington and Albemarle counties were suppressed by the USDA in an effort to protect confidentiality, so this total is incomplete.
- This amounts to at least 1.6% of farm product sales, more than 5 times the national average of 0.3%. Note that data for direct sales in Arlington and Albemarle counties were suppressed by the USDA in an effort to protect confidentiality, so this percentage is incomplete.
- Loudoun County leads the region in direct sales, with \$1.6 million.
- 30 farms in the region sold organic products.
- 96 farms market through community supported agriculture (CSA).
- 543 farms produce and sell value-added products.
- 421 farms marketed products directly to retail outlets.
- 145 farms had on-farm packing facilities.

Conservation Practices:

- 1,858 farms practice rotational or management intensive grazing.
- 8 farms practiced alley cropping or silvopasture.
- 66 farms harvested biomass for use in renewable energy.

Other Crops:

• 73 farms produced at least 371,000 bushels of barley on over 5,163 acres, worth more than \$727,000. Note that data for acreage and bushels of barley in Albemarle, Greene, Prince William, Rappahannock, and Stafford counties, and data for sales of barley in Albemarle, Greene, Madison, Orange, Prince William, Rappahannock, and Stafford counties were suppressed by the USDA in an effort to protect confidentiality, so these totals are incomplete.

Operations by Legal Status for Tax Purposes in the Northern Piedmont Region (Census of Agriculture, 2012)

Note that * denotes data that has been suppressed

	Farms	Acres
Family or individual	6,323	*695,702
Partnership	519	164,120
Corporation (family held)	504	158,995
Corporation (other than family held)	109	*40,273
Other – cooperative, estate or trust, institutional, etc.	111	*25,715
Totals	7,566	*1,084,805

County and State Highlights

Albemarle County highlights (Census of Agriculture 2012):

- 946 farms, 6% more than in 2007.
- Albemarle County has 169,000 acres of land in farms.
- Farmers sold \$31 million of products in 2012.
- \$19.5 million (63%) of these sales were crops.
- \$11.5 million (37%) of these sales were livestock.
- The most prevalent farm size is 50 to 179 acres, with 359 farms (38%) in this category.
- The next most prevalent is 10 to 49 acres, with 292 farms (31%).
- 22 farms (2%) are 1,000 acres or more.
- 360 farms (38%) are less than 50 acres.
- 641 farms (68%) sold less than \$10,000 in farm products.
- 40 farms (4%) sold more than \$100,000 in farm products.
- Albemarle County ranks 2nd in Virginia for sales of fruits, tree nuts, and berries, with \$11 million.
- The county ranks second in the state for inventory of quail, with 1,721.
- Albemarle County ranks third in the state for inventory of horses and ponies, with 3,056.
- The county ranks 4th in the state for sales of horses, with \$1.5 million.
- Albemarle County ranks 8th in Virginia for sales of sheep and goats, with \$355,000.
- The county ranks eighth in the state for inventory of sheep and lambs, with 2,659.
- 87 farms sold food directly to consumers. This is a 36% increase in the number of farms selling direct (64 in 2007).
- 2012 direct sales data for Albemarle County were suppressed by the USDA in an effort to protect confidentiality.

Arlington County highlights (Census of Agriculture 2012):

- 6 farms, the same as in 2007.
- Arlington County has 36 acres of land in farms.
- Farmers sold \$18,000 of products in 2012.
- Crop and livestock sales were suppressed by the USDA in an effort to protect confidentiality.
- The most prevalent farm size is 1 to 9 acres, with 5 farms (83%) in this category.
- The next most prevalent is 10 to 49 acres, with one farm.
- No farms are 1,000 acres or more.
- 6 farms (100%) are less than 50 acres.
- 6 farms (100%) sold less than \$10,000 in farm products.

- No farms sold more than \$100,000 in farm products.
- 2 farms sold food directly to consumers. This is four fewer farms selling direct than in 2007.
- 2012 direct sales data for Arlington County were suppressed by the USDA in an effort to protect confidentiality.

Culpeper County highlights (Census of Agriculture 2012):

- 731 farms, 10% more than in 2007.
- Culpeper County has 126,000 acres of land in farms.
- Farmers sold \$42.79 million of products in 2012.
- \$25.65 million (60%) of these sales were crops.
- \$17.14 million (40%) of these sales were livestock.
- The most prevalent farm size is 10 to 49 acres, with 302 farms (41%) in this category.
- The next most prevalent is 50 to 179 acres, with 238 farms (33%).
- 27 farms (4%) are 1,000 acres or more.
- 334 farms (46%) are less than 50 acres.
- 466 farms (64%) sold less than \$10,000 in farm products.
- 53 farms (7%) sold more than \$100,000 in farm products.
- Culpeper County ranks 2nd in Virginia for acreage of sod, but acreage figures were suppressed by the USDA in an effort to protect confidentiality.
- The county ranks 5th in the state for inventory of horses and ponies, with 2,772.
- Culpeper County ranks sixth in the state for sales of ornamentals, with \$10 million.
- The county ranks sixth in the state for sales of horses, with \$1 million.
- Culpeper County ranks 8th in Virginia for sales of milk, with \$7.2 million.
- 65 farms sold \$327,000 of food directly to consumers. This is a 30% increase in the number of farms selling direct (50 in 2007), and a 91% increase in direct sales over 2007 sales of \$171,000.
- Direct sales were 0.8% of farm product sales, more than double the national average of 0.3%.

Fairfax County highlights (Census of Agriculture 2012):

- 148 farms, 11% less than in 2007.
- Fairfax County has 7,856 acres of land in farms.
- Farmers sold \$3.4 million of products in 2012.
- \$3.2 million (94%) of these sales were crops.
- \$206,000 (6%) of these sales were livestock.
- The most prevalent farm size is 10 to 49 acres, with 58 farms (39%) in this category.

- The next most prevalent is 1 to 9 acres, with 57 (39%) farms.
- No farms are 1,000 acres or more.
- 115 farms (78%) are less than 50 acres.
- 119 farms (80%) sold less than \$10,000 in farm products.
- 4 farms (3%) sold more than \$100,000 in farm products.
- 7 farms sold \$58,000 of food directly to consumers. This is an 8-farm decrease in the number of farms selling direct, and a 2% decrease in direct sales, from 2007 sales of \$59,000.
- Direct sales were 1.7% of farm product sales, 5 times the national average of 0.3%.

Fauquier County highlights (Census of Agriculture 2012):

- 1,258 farms, 3% more than in 2007.
- Fauqueir County has 228,000 acres of land in farms.
- Farmers sold \$53.9 million of products in 2012.
- \$21.59 million (40%) of these sales were crops.
- \$32.36 million (60%) of these sales were livestock.
- The most prevalent farm size is 10 to 49 acres, with 502 farms (40%) in this category.
- The next most prevalent is 50 to 179 acres, with 390 (31%) farms.
- 45 farms (4%) are 1,000 acres or more.
- 606 farms (48%) are less than 50 acres.
- 848 farms (67%) sold less than \$10,000 in farm products.
- 81 farms (6%) sold more than \$100,000 in farm products.
- Fauquier County ranks 2nd in Virginia for inventory of horses and ponies, with \$5,282.
- The county ranks 3rd in the state for sales of horses, with \$2.1 million.
- Fauquier County ranks fifth in the state for sales of milk, with \$12 million.
- The county ranks sixth in the state for acreage of forage crops (hay, etc.) with 40,000.
- Fauquier County ranks 6th in the state for acreage of corn for silage, with 4,862.
- The county ranks sixth in Virginia for inventory of goats, with 1,601.
- Fauquier County ranks eighth in the state for sales of forage crops (hay, etc.), with \$3.3 million.
- The county ranks 9th in the state for sales of fruits, tree nuts, and berries, with \$1.6 million.
- 143 farms sold \$1.4 million of food directly to consumers. This is a 51% increase in the number of farms selling direct (95 in 2007), and a 21% decrease in direct sales, from 2007 sales of \$1.7 million.
- Direct sales were 2.6% of farm product sales, more than 8 times the national average of 0.3%.

Greene County highlights (Census of Agriculture 2012):

- 216 farms, 6 less than in 2007.
- Greene County has 27,000 acres of land in farms.
- Farmers sold \$9.9 million of products in 2012.
- \$1.6 million (16%) of these sales were crops.
- \$8.3 million (84%) of these sales were livestock.
- The most prevalent farm size is 50 to 179 acres, with 95 farms (44%) in this category.
- The next most prevalent is 10 to 49 acres, with 68 farms (31%).
- 1 farm (0%) is 1,000 acres or more.
- 75 farms (35%) are less than 50 acres.
- 141 farms (65%) sold less than \$10,000 in farm products.
- 9 farms (4%) sold more than \$100,000 in farm products.
- Greene County ranks 1st in Virginia for inventory of pheasants, but *inventory figures* were suppressed by the USDA in an effort to protect confidentiality.
- The county ranks 7th in the state for acreage of grapes, with 106.
- Greene County ranks eighth in the state for inventory of turkeys, but *inventory figures* were suppressed by the USDA in an effort to protect confidentiality.
- 17 farms sold \$75,000 of food directly to consumers. This is a 5-farm increase in the number of farms selling direct, and a 73% decrease in direct sales, from 2007 sales of \$275,000.
- Direct sales were 0.8% of farm product sales, more than double the national average of 0.3%.

Loudoun County highlights (Census of Agriculture 2012):

- 1,396 farms, 2% less than in 2007.
- Loudoun County has 135,000 acres of land in farms.
- Farmers sold \$37 million of products in 2012.
- \$26 million (70%) of these sales were crops.
- \$11 million (30%) of these sales were livestock.
- The most prevalent farm size is 10 to 49 acres, with 824 farms (59%) in this category.
- The next most prevalent is 50 to 179 acres, with 301 farms (22%).
- 18 farms (1%) are 1,000 acres or more.
- 963 farms (69%) are less than 50 acres.
- 1,069 farms (77%) sold less than \$10,000 in farm products.
- 45 farms (3%) sold more than \$100,000 in farm products.
- Loudoun County ranks 1st in Virginia for acreage of sod, but acreage *figures were* suppressed by the USDA in an effort to protect confidentiality.
- The county ranks first in the state for inventory of horses and ponies, with 5,731.

- Loudoun County ranks second in the state for sales of horses, with \$2.6 million.
- The county ranks third in the state for sales of Christmas trees, with \$556,000.
- Loudoun County ranks 7th in the state for sales of fruits, tree nuts, and berries, with \$1.9 million.
- The county ranks eighth in Virginia for sales of vegetables, with \$1.6 million.
- Loudoun County ranks 8th in the state for sales of ornamentals, with \$8.7 million.
- The county ranks 9th in the state for sales of forage crops (hay, etc.), with \$3.2 million.
- Loudoun County ranks ninth in Virginia for inventory of sheep and lambs, with 2,517.
- 210 farms sold \$1.575 million of food directly to consumers. This is a 30% increase in the number of farms selling direct (161 in 2007), and a 64% increase in direct sales, over 2007 sales of \$959,000.
- Direct sales were 4.2% of farm product sales, 14 times the national average of 0.3%.

Louisa County highlights (Census of Agriculture 2012):

- 485 farms, 9% less than in 2007.
- Louisa County has 80,000 acres of land in farms.
- Farmers sold \$14.5 million of products in 2012.
- \$6.8 million (47%) of these sales were crops.
- \$7.7 million (53%) of these sales were livestock.
- The most prevalent farm size is 50 to 179 acres, with 181 farms (37%) in this category.
- The next most prevalent is 10 to 49 acres, with 171 farms (22%).
- 10 farms (2%) are 1,000 acres or more.
- 192 farms (40%) are less than 50 acres.
- 309 farms (64%) sold less than \$10,000 in farm products.
- 29 farms (6%) sold more than \$100,000 in farm products.
- 46 farms sold \$99,000 of food directly to consumers. This is a 44% increase in the number of farms selling direct, and a 41% increase in direct sales over 2007 sales of \$70,000.
- Direct sales were 0.7% of farm product sales, more than double the national average of 0.3%.

Madison County highlights (Census of Agriculture 2012):

- 522 farms, 7% less than in 2007.
- Madison County has 107,000 acres of land in farms.

- Farmers sold \$29 million of products in 2012.
- \$11.5 million (40%) of these sales were crops.
- \$17.4 million (60%) of these sales were livestock.
- The most prevalent farm size is 50 to 179 acres, with 193 farms (37%) in this category.
- The next most prevalent is 10 to 49 acres, with 159 farms (30%).
- 26 farms (5%) are 1,000 acres or more.
- 189 farms (36%) are less than 50 acres.
- 255 farms (49%) sold less than \$10,000 in farm products.
- 48 farms (9%) sold more than \$100,000 in farm products.
- Madison County ranks 9th in Virginia for sales of horses, with \$589,000.
- The county ranks ninth in the state for inventory of turkeys, but *inventory figures were* suppressed by the USDA in an effort to protect confidentiality.
- 55 farms sold \$549,000 of food directly to consumers. This is a 41% increase in the number of farms selling direct (39 in 2007), and a \$2,000 increase in direct sales over 2007 sales.
- Direct sales were 1.9% of farm product sales, more than 6 times the national average of 0.3%.

Orange County highlights (Census of Agriculture 2012):

- 547 farms, 6% more than in 2007.
- Orange County has 105,000 acres of land in farms.
- Farmers sold \$90.58 million of products in 2012.
- \$64.9 million (72%) of these sales were crops.
- \$25.6 million (28%) of these sales were livestock.
- The most prevalent farm size is 50 to 179 acres, with 202 farms (37%) in this category.
- The next most prevalent is 10 to 49 acres, with 158 farms (29%).
- 22 farms (4%) are 1,000 acres or more.
- 194 farms (35%) are less than 50 acres.
- 314 farms (57%) sold less than \$10,000 in farm products.
- 51 farms (9%) sold more than \$100,000 in farm products.
- Orange County ranks 1st in Virginia for sales of ornamentals, with \$54 million.
- The county ranks second in the state for crop sales, with \$65 million.
- Orange County ranks third in the state for inventory of quail, but inventory figures were suppressed by the USDA in an effort to protect confidentiality.
- The county ranks sixth in the state for inventory of turkeys, with 148,000.
- Orange County ranks seventh in Virginia for sales of horses, with \$935,000.

- The county ranks 8th in the state for sales of agricultural products, with \$91 million.
- 37 farms sold \$121,000 of food directly to consumers. This is a 6-farm increase in the number of farms selling direct, and a 13% increase in direct sales, over 2007 sales of \$107,000.
- Direct sales were 0.1% of farm product sales, less than the national average of 0.3%.

Prince William County highlights (Census of Agriculture 2012):

- 330 farms, 4% less than in 2007.
- Prince William County has 36,000 acres of land in farms.
- Farmers sold \$12 million of products in 2012.
- \$5.8 million (48%) of these sales were crops.
- \$6.2 million (52%) of these sales were livestock.
- The most prevalent farm size is 10 to 49 acres, with 185 farms (56%) in this category.
- The next most prevalent is 50 to 179 acres, with 64 farms (19%).
- 4 farms (1%) are 1,000 acres or more.
- 225 farms (68%) are less than 50 acres.
- 244 farms (74%) sold less than \$10,000 in farm products.
- 23 farms (7%) sold more than \$100,000 in farm products.
- Prince William County ranks second in Virginia for inventory of Alpacas, with 585.
- The county ranks 3rd in the state for acreage of sod, with 1,162.
- 33 farms sold \$254,000 of food directly to consumers. This is a 5-farm decrease in the number of farms selling direct, and a 34% decrease in direct sales, from 2007 sales of \$382,000.
- Direct sales were 2.1% of farm product sales, 7 times the national average of 0.3%.

Rappahannock County highlights (Census of Agriculture 2012):

- 397 farms, 5% less than in 2007.
- Rappahannock County has 63,000 acres of land in farms.
- Farmers sold \$9.3 million of products in 2012.
- \$3.7 million (40%) of these sales were crops.
- \$5.6 million (60%) of these sales were livestock.
- The most prevalent farm size is 10 to 49 acres, with 166 farms (42%) in this category.
- The next most prevalent is 50 to 179 acres, with 133 farms (34%).
- 10 farms (3%) are 1,000 acres or more.
- 185 farms (47%) are less than 50 acres.
- 266 farms (67%) sold less than \$10,000 in farm products.
- 30 farms (8%) sold more than \$100,000 in farm products.

- Rappahannock County ranks 6th in Virginia for acreage of grapes, with 132.
- 53 farms sold \$466,000 of food directly to consumers. This is a 9-farm decrease in the number of farms selling direct (62 in 2007), and a 2% decrease in direct sales, from 2007 sales of \$477,000.
- Direct sales were 5% of farm product sales, more than 16 times the national average of 0.3%.

Spotsylvania County highlights (Census of Agriculture 2012):

- 369 farms, 10 more than in 2007.
- Spotsylvania County has 42,000 acres of land in farms.
- Farmers sold \$11 million of products in 2012.
- \$4 million (36%) of these sales were crops.
- \$7 million (64%) of these sales were livestock.
- The most prevalent farm size is 10 to 49 acres, with 166 farms (45%) in this category.
- The next most prevalent is 50 to 179 acres, with 96 farms (26%).
- 6 farms (2%) are 1,000 acres or more.
- 210 farms (57%) are less than 50 acres.
- 268 farms (73%) sold less than \$10,000 in farm products.
- 12 farms (3%) sold more than \$100,000 in farm products.
- 38 farms sold \$344 of food directly to consumers. This is a 65% increase in the number of farms selling direct (23 in 2007), and a 2% increase in direct sales, over 2007 sales of \$344,000.
- Direct sales were 3.1% of farm product sales, more than 10 times the national average of 0.3%.

Stafford County highlights (Census of Agriculture 2012):

- 215 farms, 8% less than in 2007.
- Stafford County has 15,260 acres of land in farms.
- Farmers sold \$2.74 million of products in 2012.
- \$1.34 million (49%) of these sales were crops.
- \$1.4 million (51%) of these sales were livestock.
- The most prevalent farm size is 10 to 49 acres, with 94 farms (44%) in this category.
- The next most prevalent is 50 to 179 acres, with 60 farms (28%).
- No farms are 1,000 acres or more.
- 134 farms (62%) are less than 50 acres.
- 167 farms (78%) sold less than \$10,000 in farm products.
- 3 farms (1%) sold more than \$100,000 in farm products.

- 27 farms sold \$336,000 of food directly to consumers. This is a 93% increase in the number of farms selling direct (14 in 2007), and a 23% decrease in direct sales, from 2007 sales of \$434,000.
- Direct sales were 12.3% of farm product sales, more than 41 times the national average of 0.3%.

The Five-County Rappahannock-Rapidan Region

Highlights of the five-county region's farms (Census of Agriculture 2012)

Culpeper, Fauquier, Madison, Orange, and Rappahannock Counties

Land:

- 3,455 farms. This is 2% more than the 2007 count of 3,387.
- The five-county region has 8% of Virginia's farms.
- 130 (4%) of these are 1,000 acres or more.
- 1,508 (44%) farms are less than 50 acres.
- The most prevalent farm size is less than 50 acres.
- Average farm size is 182 acres, the same as the Virginia average.
- The region has 629,295 acres of land in farms.
- This amounts to 8% of the state's farmland.
- The region holds 202,379 acres of harvested cropland.
- 169 farms have a total of 1,790 acres of irrigated land.
- Average value of land and buildings per farm is \$1.3 million. This is 1.7 times the state average of \$776,719.

Sales (Note that there may be discrepancies between Census of Agriculture data and Bureau of Economic Analysis data shown elsewhere):

- \$225 million of crops and livestock sold (2012), 6% of state farm product sales.
- This is a 26% increase in sales over 2007 sales of \$179 million. The increase was primarily due to a rise in corn and other grain prices that appears to be short-lived. In response to higher prices, more farmers also planted more corn.
- \$127 million of crops were sold (56% of sales).
- \$98 million of livestock and products were sold (44% of sales).
- 2,149 (62%) of the region's farms sold less than \$10,000 of products in 2012. Their aggregate sales of \$5 million amounted to 2.3% of the region's farm product sales.
- 263 farms (8%) sold more than \$100,000 of products, an aggregate total of \$188 million, 83% of the region's farm product sales.
- 451 (13%) farms received \$3.5 million of federal subsidies in 2012.
- 2,422 (70%) of the five-county region's farms reported net losses in 2012. This is higher than the Virginia rate of 62%.

Production Expenses

- Total farm production expenses were \$258 million, for an increase of \$67 million (35%) in production costs over 2007 levels. Note that production expenses exceeded cash receipts by \$33 million, or 15% of sales.
- Production expenses included the following:

	\$ millions
Hired farm labor	45
Feed purchased	43
Other production expenses	24
Supplies, repairs, & maintenance	19
Fertilizer, lime, & soil conditioners purchased	17
Gasoline, fuels, & oils	16
Property taxes paid	14
Interest expense	13
Livestock & poultry purchased or leased	11

Grains, Dry Edible Beans, Oil Crops, and others:

- Farms in the five-county RRRC region sold \$42 million of grains, oil crops and edible beans in 2012, \$30 million (238%) more than the \$12 million sold in 2007.
- 179 of the region's farms sold at least \$19.7 million (3.2 million bushels) of corn on 27,916 acres in 2012. This total understates actual sales because data for Rappahannock County were suppressed by USDA in an effort to protect confidentiality.
- This was an average price of \$6.16 per bushel.
- In 2007, 165 farms in the region sold \$6.4 million of corn.
- 133 of the region's farms sold at least \$18.6 million (1.5 million bushels) of soybeans on at least 31,645 acres in 2012. This total understates actual acreage and sales because data for Rappahannock County were suppressed by USDA in an effort to protect confidentiality.
- This was an average price of \$12.40 per bushel.
- In 2007, 96 region farms sold \$4.2 million of soybeans.
- 62 of the five-county region's farmers raised at least 401,497 bushels of wheat on 6,168 acres in 2012. This total understates actual sales because data for Rappahannock County were suppressed by USDA in an effort to protect confidentiality.
- This wheat crop sold for a total of at least \$1.98 millon. This total understates actual sales because data for Culpeper and Rappahannock Counties were suppressed by USDA in an effort to protect confidentiality.
- 41 farms produced at least 295,995 bushels of barley on 4,098 acres, worth \$517,000. This total understates actual sales because data for Rappahannock County were suppressed by USDA in an effort to protect confidentiality.

Cattle & Dairy:

- 1,663 farms held an inventory of 137,890 cattle and calves in 2012.
- 65,984 cattle worth \$50 million were sold from 1,421 farms in 2012. This represents a 19% increase over 2007 sales of \$42 million.
- 60 farms sold at least \$28 million of milk and dairy products. This total understates actual sales because data for Rappahannock County were suppressed by USDA in an effort to protect confidentiality.
- 1,697 farms produced 253,050 dry tons of forage crops (hay, etc.) on 124,064 acres of cropland. Of these, 838 farms sold \$9.7 million of forage.
- In addition, 98 farms produced 130,878 tons of corn silage on 9,865 acres.

Other livestock & animal products:

- 95 farms sold 2,573 hogs and pigs with an aggregate value of \$387,000. This is a 22% increase over 2007 sales of \$317,000.
- 112 farms held an inventory of 2,505 hogs and pigs in 2012.
- 351 farms sold a total of \$5.3 million of horses in 2012. A smaller number (286 farms) sold more than \$19 million of horses in 2007. Thus, even though the number of farms selling horses increased, total sales declined considerably.
- 562 farms held an inventory of 17,725 laying hens in 2012.
- 42 broiler chicken producers held an inventory of 16,531 birds.
- 355 farms sold at least \$12 million of poultry and eggs in 2012. This total understates actual sales because data for Madison County were suppressed by USDA in an effort to protect confidentiality.
- 188 farms held an inventory of 3,918 sheep, lambs, and goats, selling animals valued at \$530,000.

Nursery, Landscape, & Ornamental Crops:

- 119 farms sold \$68.7 million of ornamental and nursery crops in 2012. This was an increase over 2007, when 94 farms sold \$55.9 million.
- 43 of the region's farms sold \$113,000 of Christmas trees. This total understates actual sales because data for Fauquier County were suppressed by USDA in an effort to protect confidentiality.

Vegetables & Melons (some farmers state that Ag Census data do not fully represent vegetable production):

- 118 farms produced \$2 million of vegetables on 386 acres of land in 2012.
- 57 farms raised at least 25 acres of potatoes.
- Vegetable sales totaled at least \$883,000 in 2007, from 75 farms. This total understates actual sales because data for Madison County were suppressed by USDA in an effort to protect confidentiality.

Fruits, Nuts, & Berries (some farmers state that Ag Census data do not fully represent fruit production):

- The region has 167 fruit or nut farms with 1,513 acres of orchard.
- These farms sold \$4.8 million of fruits and nuts.
- Fruit and nut sales totaled at least \$3.7 million in 2007, from 158 farms. This total understates actual sales because data for Madison County were suppressed by USDA in an effort to protect confidentiality.

Direct & organic sales:

- 353 (10%) farms sold \$2.8 million of food directly to consumers. This is a 27% increase in the number of farms selling direct (277 in), and a 7% decrease in direct sales from \$3 million in 2007. Direct sales account for 1.3% of the region's farm sales, 4 times the national average.
- The five-county region's farmers make up 10% of the farms in Virginia that sell direct, and account for 7% of Virginia's direct sales (\$42 million of direct sales in Virginia in 2012, more than the \$29 million sold in 2007).
- 38 of the region's farms market through community supported agriculture (CSA).
- 211 of the region's farms sell food directly to retail outlets.
- 14 farms sold organic foods in 2012, but sales data were not reported by USDA, in an effort to protect confidentiality.
- This is 10% of the Virginia farms selling organic.
- 285 farms produce added-value products on the farm.

Conservation practices:

- 866 farms use rotational management or intensive grazing.
- 70 farms have some capacity for packing food products on-farm.

State of Virginia highlights (Census of Agriculture 2012):

- 46,030 farms, 3% less than in 2007.
- Virginia has 8.3 million acres of land in farms.
- Farmers sold \$3.75 billion of products in 2012.
- \$1.36 billion (36%) of these sales were crops.
- \$2.39 billion (64%) of these sales were livestock.
- The most prevalent farm size is 50 to 179 acres, with 16,850 farms (37%) in this category.
- The next most prevalent is 10 to 49 acres, with 14,425 farms (31%).
- 1,375 farms (3%) are 1,000 acres or more.
- 17,768 farms (39%) are less than 50 acres.
- 28,602 farms (62%) sold less than \$10,000 in farm products.
- 4,431 farms (10%) sold more than \$100,000 in farm products.
- Virginia ranks 4th in the United States for sales of tobacco, with \$101 million.
- The state ranks sixth in the country for inventory of turkeys, with 5.2 million.
- Virginia ranks seventh in the country for sales of Christmas trees, with \$7.9 million.
- The state ranks 9th in the country for sales of horses, with \$32 million.
- Virginia's vegetable sales totaled \$92 million.
- 3,581 farms sold \$41.7 million of food directly to consumers. This is a 25% increase in the number of farms selling direct (2,855 in 2007), and a 44% increase in direct sales over 2007 sales of \$28.9 million.
- Direct sales were 1.1% of farm product sales, more than 3 times the national average of 0.3%.
- If direct food sales made up a single commodity, the value of these sales would outrank the state's 18th-most important product, other vegetables.
- 386 farms market through community supported agriculture (CSA).
- 2,677 farms produce and sell value-added products.
- 1,769 farms marketed products directly to retail outlets.
- 704 farms had on-farm packing facilities.
- 9,315 farms practice rotational or management intensive grazing.
- 74 farms practiced alley cropping or silvopasture.
- 387 farms harvested biomass for use in renewable energy.

Virginia's top farm products in 2012 (Economic Research Service)

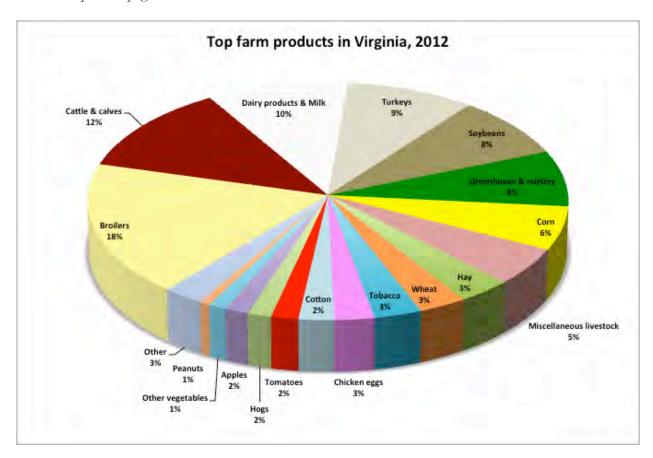
The data in the table and pie chart below are for all farms in the state of Virginia combined. See chart on next page.

		\$ millions
1	Broilers	649
2	Cattle & calves	434
3	Dairy products & Milk	358
4	Turkeys	324
5	Soybeans	302
6	Greenhouse & nursery	272
7	Corn	212
8	Miscellaneous livestock	181
9	Hay	123
10	Wheat	109
11	Tobacco	109
12	Chicken eggs	91
13	Cotton	81
14	Tomatoes	62
15	Hogs	55
16	Apples	54
17	Other	48
18	Other vegetables	41
19	Peanuts	24
20	Potatoes	15
21	Barley	12
22	Grapes	11
23	Peaches	6
24	Farm chickens	2
25	Oats	1

Note also that at \$42 million, direct sales from farmers to household consumers amount to just a bit more than the value of the 18th-ranking product, other vegetables.

Virginia's top farm products in 2012 (Economic Research Service)

See table on previous page



Source: USDA Economic Research Service

Balance of Cash Receipts and Production Costs (BEA):

7,566 Northern Piedmont region farmers sell \$360 million of food commodities per year (1989-2013 average), spending \$469 million to raise them, for an average loss of \$110 million each year (30% of cash receipts). This is an average net cash loss of \$14,540 per farm. Note that these sales figures compiled by the BEA may differ from cash receipts recorded by the USDA Agriculture Census (above).

Overall, farm producers spent \$2.7 billion more to produce crops and livestock over the years 1989 to 2013 than they earned by selling these products. Indeed, farm production costs exceeded cash receipts for 22 years of that 25-year period. Moreover, 72% of the region's farms reported a net loss in 2012 (Ag Census), and Northern Piedmont region farmers and ranchers earned \$273 million less by selling commodities in 2013 than they earned in 1969 (in 2013 dollars).

Farmers and ranchers earn another \$59 million per year of farm-related income — primarily custom work, and rental income (25-year average for 1989-2013). Federal farm support payments are also a more important source of net income than commodity production, averaging \$10 million per year for the region for the years 2001-2013 (this range of years was truncated due to missing data).

The region's consumers:

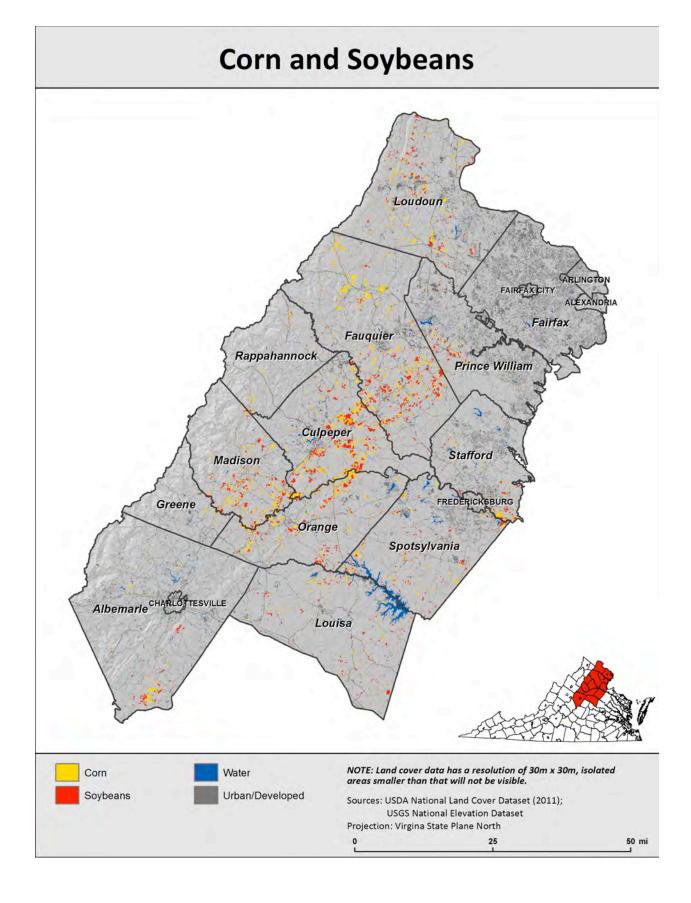
See also information covering low-income food consumption and food-related health conditions, above. Northern Piedmont region consumers spend \$7.5 billion buying food each year, including \$4.5 billion for home use. Most of this food is sourced outside the region, so Northern Piedmont Region consumers spend about \$6.8 billion per year buying food sourced outside. More than \$5.6 million of food products (1.6% of farm cash receipts and 0.07% of the region's consumer market) are sold by farmers directly to consumers.

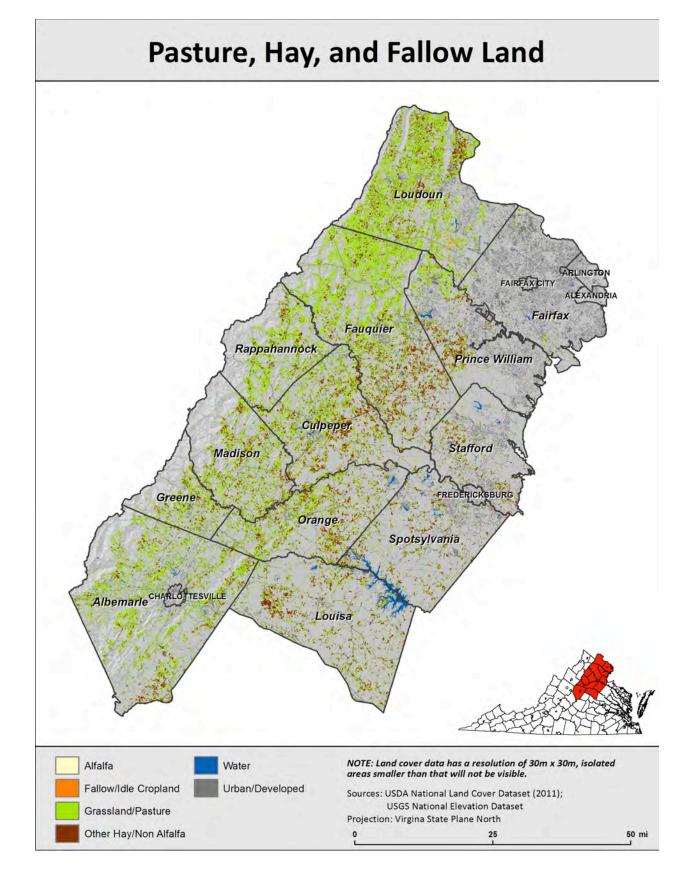
Estimated change in net assets (that is, assets minus liabilities) for all region households combined was a loss of \$3.7 billion in 2012 alone (BLS). This places additional pressure on Northern Piedmont Region consumers trying to buy food.

Farm and food economy summary:

Farmers lose \$110 million each year producing food commodities, gain \$10 million in farm supports, and spend \$200 million buying inputs sourced outside of the region. Even when farmers make money, these input purchases result in substantial losses to the region as a whole. Overall, farm production creates a loss of \$300 million to the region.

Meanwhile, consumers spend \$6.8 billion buying food from outside. Thus, total loss to the region is \$7.1 billion of potential wealth *each year*. This loss amounts to nearly 20 times the value of all food commodities raised in the region.





Northern Piedmont region: markets for food eaten at home (2011):

Northern Piedmont Region residents purchase \$7.5 billion of food each year, including \$4.5 billion to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 1,024
Fruits & vegetables	778
Cereals and bakery products	596
Dairy products	468
"Other," incl. Sweets, fats, & oils	1,592

If each Northern Piedmont region resident purchased \$5 of food directly from farmers in the region each week, this would generate \$793 million of new income for the region's farmers.

Albemarle County: markets for food eaten at home (2012):

Albemarle County residents purchase \$245 million of food each year, including \$145 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 33
Fruits & vegetables	25
Cereals and bakery products	19
Dairy products	15
"Other," incl. Sweets, fats, & oils	52

Arlington County: markets for food eaten at home (2012):

Arlington County residents purchase \$515 million of food each year, including \$305 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 70
Fruits & vegetables	53
Cereals and bakery products	41
Dairy products	32
"Other," incl. Sweets, fats, & oils	109

Culpeper County: markets for food eaten at home (2012):

Culpeper County residents purchase \$115 million of food each year, including \$69 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 16
Fruits & vegetables	12
Cereals and bakery products	9
Dairy products	7
"Other," incl. Sweets, fats, & oils	24

Fairfax County: markets for food eaten at home (2012):

Fairfax County residents purchase \$2.7 billion of food each year, including \$1.6 billion to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 364
Fruits & vegetables	276
Cereals and bakery products	212
Dairy products	166
"Other," incl. Sweets, fats, & oils	565

Fauquier County: markets for food eaten at home (2012):

Fauquier County residents purchase \$161 million of food each year, including \$96 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 22
Fruits & vegetables	17
Cereals and bakery products	13
Dairy products	10
"Other," incl. Sweets, fats, & oils	34

Greene County: markets for food eaten at home (2012):

Greene County residents purchase \$45 million of food each year, including \$27 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 6
Fruits & vegetables	5
Cereals and bakery products	4
Dairy products	3
"Other," incl. Sweets, fats, & oils	10

Loudon County: markets for food eaten at home (2012):

Loudon County residents purchase \$776 million of food each year, including \$460 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 106
Fruits & vegetables	80
Cereals and bakery products	61
Dairy products	48
"Other," incl. Sweets, fats, & oils	164

Louisa County: markets for food eaten at home (2012):

Louisa County residents purchase \$81 million of food each year, including \$48 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 11
Fruits & vegetables	8
Cereals and bakery products	6
Dairy products	5
"Other," incl. Sweets, fats, & oils	17

Madison County: markets for food eaten at home (2012):

Madison County residents purchase \$33 million of food each year, including \$19 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 4
Fruits & vegetables	3
Cereals and bakery products	3
Dairy products	2
"Other," incl. Sweets, fats, & oils	7

Orange County: markets for food eaten at home (2012):

Orange County residents purchase \$83 million of food each year, including \$49 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 11
Fruits & vegetables	9
Cereals and bakery products	7
Dairy products	5
"Other," incl. Sweets, fats, & oils	18

Prince William County: markets for food eaten at home (2012):

Prince William County residents purchase \$995 million of food each year, including \$590 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 136
Fruits & vegetables	103
Cereals and bakery products	79
Dairy products	62
"Other," incl. Sweets, fats, & oils	211

Rappahannock County: markets for food eaten at home (2012):

Rappahannock County residents purchase \$18 million of food each year, including \$11 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 2
Fruits & vegetables	2
Cereals and bakery products	1
Dairy products	1
"Other," incl. Sweets, fats, & oils	4

Spotsylvania County: markets for food eaten at home (2012):

Spotsylvania County residents purchase \$303 million of food each year, including \$179 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 41
Fruits & vegetables	31
Cereals and bakery products	24
Dairy products	19
"Other," incl. Sweets, fats, & oils	64

Stafford County: markets for food eaten at home (2012):

Stafford County residents purchase \$319 million of food each year, including \$189 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 43
Fruits & vegetables	33
Cereals and bakery products	25
Dairy products	20
"Other," incl. Sweets, fats, & oils	68

City of Alexandria: markets for food eaten at home (2012):

Alexandria residents purchase \$346 million of food each year, including \$205 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 47
Fruits & vegetables	36
Cereals and bakery products	27
Dairy products	21
"Other," incl. Sweets, fats, & oils	73

City of Charlottesville: markets for food eaten at home (2012):

Chalottesville residents purchase \$106 million of food each year, including \$63 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 15
Fruits & vegetables	11
Cereals and bakery products	8
Dairy products	7
"Other," incl. Sweets, fats, & oils	23

City of Fairfax: markets for food eaten at home (2012):

City of Fairfax residents purchase \$56 million of food each year, including \$33 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 8
Fruits & vegetables	6
Cereals and bakery products	4
Dairy products	3
"Other," incl. Sweets, fats, & oils	12

Falls Church: markets for food eaten at home (2012):

Falls Church residents purchase \$30 million of food each year, including \$18 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 4
Fruits & vegetables	3
Cereals and bakery products	2
Dairy products	2
"Other," incl. Sweets, fats, & oils	6

Fredericksburg: markets for food eaten at home (2012):

Fredericksburg residents purchase \$61 million of food each year, including \$36 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$8
Fruits & vegetables	6
Cereals and bakery products	5
Dairy products	4
"Other," incl. Sweets, fats, & oils	13

Manassas: markets for food eaten at home (2012):

Manassas residents purchase \$83 million of food each year, including \$55 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 13
Fruits & vegetables	10
Cereals and bakery products	7
Dairy products	6
"Other," incl. Sweets, fats, & oils	20

Manassas Park: markets for food eaten at home (2012):

Manassas Park residents purchase \$35 million of food each year, including \$21 million to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 5
Fruits & vegetables	4
Cereals and bakery products	3
Dairy products	2
"Other," incl. Sweets, fats, & oils	8

Washington, DC Metro Area: markets for food eaten at home (2012):

Metro DC residents purchase \$14.4 billion of food each year, including \$8.6 billion to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 1,967
Fruits & vegetables	1,493
Cereals and bakery products	1,144
Dairy products	898
"Other," incl. Sweets, fats, & oils	3,057

Virginia: markets for food eaten at home (2012):

Virginia residents purchase \$20 billion of food each year, including \$12 billion to eat at home. Home purchases break down in the following way:

	millions
Meats, poultry, fish, and eggs	\$ 2,747
Fruits & vegetables	2,085
Cereals and bakery products	1,598
Dairy products	1,254
"Other," incl. Sweets, fats, & oils	4,269

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 the U.S.: http://www.crcworks.org/?submit=fffc

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 in March, 2008, by Ken Meter at Rep. Collin Peterson's (D-MN) Minnesota agricultural forum, called the "Home Grown Economy": http://www.crcworks.org/crcppts/petersonkm08.pdf

For further information: http://www.crcworks.org/

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