

Virginia Farm to Table

Healthy Farms and Healthy Food for the Common Wealth and Common Good

A Strategic Plan for
Strengthening
Virginia's Food System
and
Economic Future

Virginia Cooperative Extension





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Find this report on the web at: www.virginiafarmtotable.org

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Contents

Acknowledgements	III
A Call to Action: Implementing the Recommendations of the Virginia Farm to Table Plan	VI
Executive Summary	1
Virginia Farm to Table Plan of Action	2
A Logic Model for the Virginia Farm to Table Plan	5
Virginia Farm to Table Plan	10
Introduction	10
Why a Virginia Farm to Table Plan?.....	11
Specific Goals of the Virginia Food System Council.....	12
Assets for a Strong Local Food System and Economic Future	13
What is a Food System?.....	14
Emergence of Local Foods.....	15
Market Demand and the Opportunity.....	16
Building Understanding of Virginia’s Food System	16
Characteristics of Virginia Agriculture	17
Farm Inputs.....	18
Changing Demographics – Loss of Small and Mid-sized Farms	18
Food, Health and Hunger	19
Soils, Water, Food Waste, Energy and the Environment.....	21
The Planning, Information Gathering and Vetting Process.....	24
Demographics of Survey Respondents	25
Business and Production Management	28
Market Development.....	29
Community Food System Explorer	30
Cultivating Virginia Farm-to-School.....	31
Farm-to-University Opportunities	32
Food System Planning, Management and Policy	32
Food Security, Food Safety, Diet and Health	33
Implementing the Virginia Farm to Table Plan	36
Assessing Progress	36
Conclusion	38
References	39
Virginia Farm to Table Recommendations at a Glance	41
Appendix A.	47
Appendix B.	48
Appendix C.	57
Appendix D.	60
Appendix F.	63
Appendix G.	67

A Call to Action: Implementing the Recommendations of the Virginia Farm to Table Plan

The Virginia Farm to Table Plan is an initiative that builds on the rich agricultural history and entrepreneurship of Virginia. Virginia's overall food system directly impacts the survival and viability of farms and farmland; the economic development of rural and urban communities; the care, restoration and resilience of ecological resources such as local waterways and the Chesapeake Bay; and critical health issues. Therefore, the promotion of healthy farms and healthy food from farm to consumer table can have a positive impact on the common wealth and common good of Virginia.

Virginia's agricultural industry is very diverse with different levels of local, regional, national and international trade of Virginia commodities and food products. The Virginia Farm to Table Plan is focused on Virginia's emerging local and regional food commerce and the enhancement of the health and resilience of communities and localities across the Commonwealth.

The unprecedented demand for local and regionally identified foods continues to grow in Virginia and across the United States. For purpose of this report and Plan, local is defined as grown and produced in Virginia. The demand for locally-grown food has also created a myriad of economic and social opportunities for agricultural producers, entrepreneurs and communities. Because the food system is so fundamental and closely interconnected, its significance for economic vitality and community viability of a particular place cannot be overstated.

Families and households in Virginia spend over \$19 billion annually on food purchases. The purchasing power these food dollars represent can be a powerful economic driver within Virginia's local farm and food economy. Encouraging the continued development of Virginia's food and farm economy can also impact individual and community health outcomes and improve Virginians access to fresh, whole nutritious foods.

Virginia was recently recognized as an emerging leader in the Nation's local food movement. The development of Virginia's local food movement has experienced growth through many different initiatives and businesses. Farmers markets are the most visible component of the local food movement, and Virginia has experienced significant growth in farmers markets over the past ten years. At the same time, new business enterprises and community initiatives have been incubated and expanded across the Commonwealth. These businesses and initiatives include food hubs, cooperatives, produce auctions, online farmers markets and Community Supported Agriculture (CSAs), urban and community gardens, food policy councils and working groups, Buy Fresh Buy Local chapters, crop mobs

and gleaning clubs, farm-to-school, university, hospital and institutional procurement programs.

However, challenges remain and a more concerted statewide effort is needed to develop supply, markets, infrastructure, programs and policies to optimize the economic framework and access of this movement.

The overall objective of the Plan is to educate and communicate to the public, the food system stakeholders, and to key decision-makers a sustainable food system's impact on economic development, health, natural resources and social well-being; and how Virginia's food system can be strengthened to address key issues facing farmers, food entrepreneurs, and communities.

In collaborating to implement this Plan, we will grow jobs and new entrepreneurs, encourage durable economic development around farming and food, maintain farmland and working landscapes, improve public health, increase food security, and strengthen community viability for a stronger local food system and brighter economic future.

Eric Bendfeldt and Crystal Tyler-Mackey

Virginia Farm to Table Team and the Virginia Food System Council



Encouraging greater access to fresh fruits and vegetables.

Executive Summary

The Virginia Farm to Table Plan is an initiative that builds on the rich agricultural history and entrepreneurship of Virginia. As long ago as The 1607 Jamestown Settlement, agriculture and innovative farming played a critical role in the establishment and survival of communities. The early settlers of Jamestown learned much from Native Americans about innovative food production and survival in their new environment; crop rotations, planting in rows, fertilizing and composting that allowed the settlers to survive the harsh winters of their new surroundings.

This entrepreneurial and innovative spirit continued and was strengthened by the work of prominent Virginians like George Washington, Thomas Jefferson, James Madison, Edmund Ruffin, Cyrus McCormick and others throughout Virginia history. The same entrepreneurial spirit is evident today with Virginia emerging as one of the nation's leaders in the local food movement (Denckla Cobb, 2011).

The Virginia Farm to Table Plan builds on this tradition and strengthens the state's food system and economic future from the farm to the table. A food system is defined as the production, processing, distribution, sales, purchasing, preparation, consumption, and waste disposal pathways of food. Within each of these sectors and pathways, there are opportunities for job creation, business incubation and expansion, health promotion, improved access to healthy, nutritious food, enhanced environmental stewardship and economic success.

A key tenet for the Virginia Farm to Table Plan is that quality food should be affordable and accessible to everyone in Virginia regardless

of economic means. However, the social, environmental and economic importance of farming and food is often overlooked and under-appreciated by individuals and communities. Agriculture plays a critical role in maintaining a healthy environment especially water resources locally and in the Chesapeake Bay. The social, economic, and environmental impact of Virginia's food system is profound; therefore, ongoing education is needed to educate individuals, communities, and decision makers about these impacts. Strong healthy communities and local economies will ensure a strong healthy state economy.

Because the food system is so fundamental and closely interconnected, its significance for economic vitality and community viability of a particular place cannot be overstated. Virginia's overall food system directly impacts the survival and viability of farms and farmland, the economic development of rural and urban communities, the resilience of ecological resources, and critical health issues. Thus, healthy farms and healthy food from farm to consumer table can positively impact the common wealth and common good of Virginia.

Participants at the Shenandoah Valley Farm-to-Table Summit providing key input to the Plan.



“I know of no pursuit in which more real and important services can be rendered to any country than by improving its agriculture.”

George Washington, First President of the United States

Virginia's agricultural industry is very diverse with different levels of local, regional, national and international trade. Diversity in the agricultural and food system in the form of farmer background and experience, ownership structure, scale, product, production method, and market strategy is one indicator and measure of sustainability of food supply.

The economic impact of Virginia agriculture is reported to be \$55 billion annually, with the industry providing more than 357,000 jobs across the state. For every job within the agricultural and forestry sector, another 1.5 jobs is supported as an indirect economic benefit and impact. The annual economic impact results from \$2.9 billion in direct agricultural output; \$26 billion in value-added industrial output; and an additional \$26 billion generated from other agriculture-related business output. Even with this economic output, there are still more growing and emerging

Virginia Farm to Table Plan of Action

The Virginia Farm to Table Plan's objective is to identify issues facing farmers, innovators in the food system, and communities across the state, and to suggest how those can be addressed to strengthen Virginia's overall food system. The Virginia Farm to Table Plan Team drew on the expertise and experience of more than 1,920 individuals across the Commonwealth who work in agriculture, aquaculture, fishing, education, finance, philanthropy, nutrition, community planning and economic development, land and natural resources conservation, public policy, local and state government, academics, and youth development. The 38 farm to table recommendations were developed and distilled from research and information gathered from farm-to-table summits, forums, listening sessions, an online survey, and focus group meetings conducted over a 15-month period by the Virginia Farm to Table Team and the Virginia Food System Council.

Facilitated discussions were held at the 2nd Virginia Food Security Summit to review the Plan's top eight recommendations for immediate action and implementation. Based on discussions and results of a written survey at the Summit, the following recommendations for immediate implementation and action were further vetted to develop actionable steps (University of Virginia, 2012).

Criteria for selecting the top three action steps for each recommendation

- How powerful is the action likely to be to implementing this strategic priority?
- Is the action practical?
- Is the action doable in a timeframe of 1- 2 years?
- If the action affordable (people, effort, and money)?
- Is the action politically feasible?

1. The Virginia Food System Council with its participating organizations will shepherd and support the implementation of the Virginia Farm to Table Plan by working closely with universities, agencies, organizations, funders and the private sector. The Council will develop and report on within 9 months:

- a. A structural framework that is transparent, inclusive, and clear, and that draws connections across sectors.
- b. A marketing plan that distinguishes between different constituencies and among different purposes: education, policy, and alliances.

- c. A business plan that includes a budget, identifies the variety of funders, and targets specific actions to specific funders.

2. Work with the Virginia Beginning Farmer and Rancher Coalition, coordinated by Virginia Tech and Virginia State University, to recruit, train, and establish the next generation of farmers and farm workers to provide quality food through ecologically sound and profitable production systems.

- a. Expand farming education in order to re-energize the idea of farming and to address the changing nature of farms.
- b. Focus efforts on working and teaching farms that provide training, apprenticeships, and labor opportunities.
- c. Expand the marketing in order to help the coalition grow.

3. Establish a Virginia food system report card to facilitate assessment and collection of baseline data for monitoring hunger, health, environmental performance, and advancements of Virginia's food system.

- a. Conduct an assessment and analysis of local foodsheds in order to build baseline data for the report card.
- b. Delineate benchmarks and be sure to address desired outcomes based on a community agreement.
- c. Create a working group that is regional and consists of a broad base of stakeholders.

4. Work with the Virginia Food System Council to remove barriers that impede the development and expansion of the production, processing, distribution, and marketing capacity of locally-grown Virginia foods.

- a. Facilitate the development of standards for direct sales to consumers to provide transparency and access to reliable, factual information.
- b. Ensure proper scales for establishing processing regulations, infrastructure, and resource assistance for farmers that need help overcoming hurdles.
- c. Make farmland more accessible for young farmers (including financially).

5. Work with state and federal agencies and institutions to increase their support for locally-grown Virginia food and farm products.

- a. Overcome bureaucratic regulation barriers for implementing the use of local food in all state and county level institutions.

- b. Help producers in overcoming bureaucratic and regulation barriers.
- c. Develop education for all people, from pre-Kindergarten to higher education to consumer and producer awareness.

6. Set measurable goals and track procurement purchases and costs of locally-grown Virginia food and farm products for all state agencies, schools, universities, and other institutions.

- a. Streamline and standardize guidelines for purchasers, farmers, and distributors.
- b. Educate both purchasers and farmers about all the opportunities that are available to them as well as institutional needs.
- c. We need a statewide umbrella system to track progress that works for everyone.

7. Establish a comprehensive informational website and networking resource for all Virginia local food system resources and ecologically sound farming practices.

- a. Identify the user base and the site owner.
- b. Spell out how this site would function, what services it would offer, and how it would look.

8. Establish a marketing campaign to challenge Virginia households and businesses to buy \$10 per week of locally-grown Virginia food and farm products year round.

- a. Include messages that explain the accessibility and importance of local food.
- b. The marketing campaign should take on a variety of forms.
- c. The marketing campaign needs to be extensive and intensive to infiltrate and be visible in a wide variety of communities, places, and venues to affect all participants in Virginia's food system.

Participants of the 2nd Virginia Food Security Summit also emphasized that ongoing education and institutional support should be overarching strategies for advancing the Plan and its implementation. Additionally, summit participants emphasized that the Plan should be undergirded by **values of community, compassion, justice, fairness, balanced leadership, equitable participation, resilience, self-reliance, independence, year round availability and accessibility, and a strong viable future** for all Virginia farmers and farmland.

economic opportunities for Virginia farmers and food entrepreneurs (VDACS, 2011).

The Virginia Farm to Table Plan is focused on emerging local and regional food commerce, and building a strong, demographically diverse, profitable and sustainable food and farm sector across Virginia that provides differentiated place-based products for local and regional markets. Within this context, the Plan aims to help Virginia farmers gain a competitive advantage for increased leverage and position in local and regional markets, while being conscious that many rural and urban communities struggle to afford and access quality healthful foods.

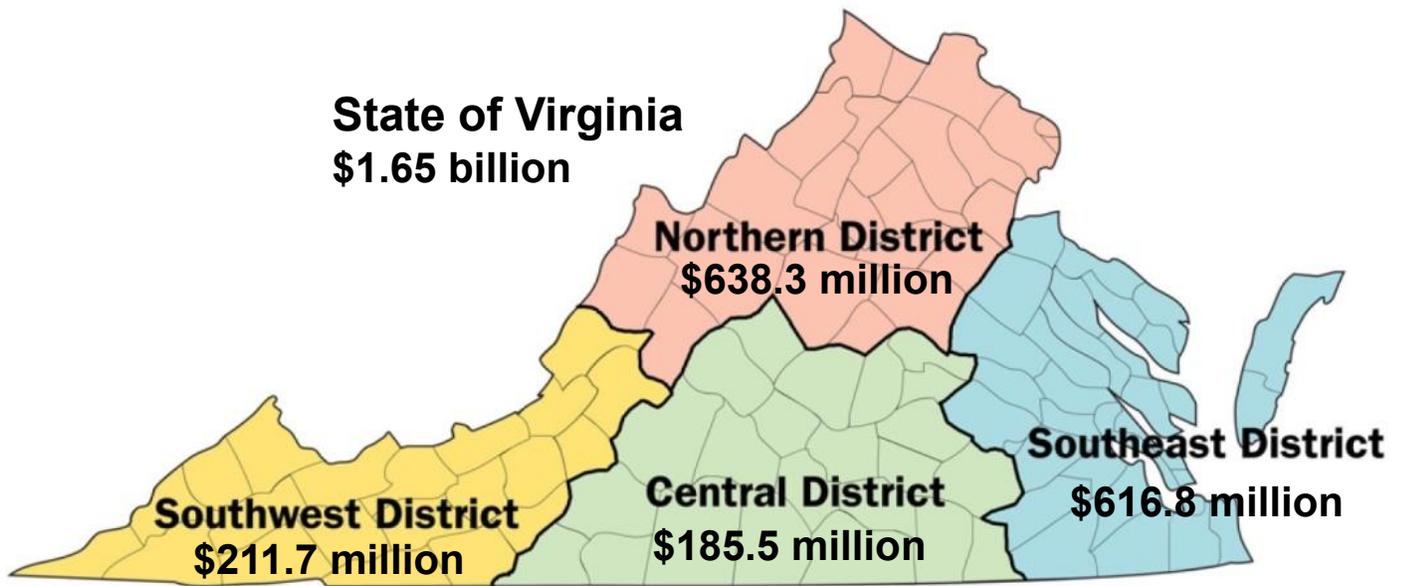
The unprecedented demand for local and regionally identified foods continues to grow in Virginia and across the United States. Low and Vogel (2011) recently reported local food sales, through direct farmer-to-consumer and wholesale market channels, in the U.S. to be \$4.8 billion in 2008. The demand has also created a myriad of economic and social opportunities for agricultural producers, entrepreneurs and communities.

From 2002 to 2007, Virginia experienced a 13% increase in the number of farms selling direct to consumers. The value of these direct-to-consumer sales increased 72% over the same time period, from \$16.8 million to 28.9 million. Today, Virginia has over 200 farmers markets and 135 Community Supported Agriculture (CSAs) operations, and the number continues to grow (USDA, National Agricultural Statistics Service 2009a).

Virginia families and households spend over \$19 billion annually on food purchases (Meter, 2011). These food dollars can be a powerful economic driver for Virginia's farm and food economy. Virginia Cooperative Extension estimates that if each household in Virginia spent \$10 per week of their food budget on locally-grown Virginia food; \$1.65 billion would be generated annually in direct economic impact (Benson and Bendfeldt, 2007).

In 2008, Virginians spent \$11 billion on food eaten at home. Foods eaten at home included \$2.6 billion worth of meat, poultry, fish and eggs; \$1.8 billion of fruits and vegetables; \$1.5 billion of cereals and bakery products; \$1.2 billion of dairy products; and \$3.8 billion of sweets, fats, and oils (Meter, 2011). Therefore, every Virginia community would benefit from more farmers producing products for in-state purchase and consumption.

New business enterprises and community initiatives have been incubated and expanded across the Commonwealth over the past five years. These businesses and initiatives include food hubs, cooperatives, produce auctions, online farmers markets, Community Supported Agriculture (CSAs), urban and community gardens, food policy councils and working groups, Buy Fresh Buy Local chapters, crop mobs



Direct economic impact generated annually for Virginia and four Cooperative Extension Districts if each household in Virginia spent \$10 per week of their total food budget on locally-grown Virginia food and farm products (Benson and Bendfeldt, 2007).

and gleaning clubs, farm-to-school, university, hospital and institutional procurement programs. However, challenges remain and a more concerted multi-sector statewide food system effort is needed to seize the economic opportunity.

Virginia also has the opportunity to enhance local and regional food systems to improve health outcomes, reduce healthcare costs, and address potential economic leakage in communities due to lost productivity. Economic leakage simply means total sales and economic output within an area are not as much as they could be based on the area's population, income, capacity and existing resources.

In the past ten years, the prevalence of obesity in Virginia increased from 19.3 to 25.5% of the population. Even though this obesity rate is lower than many other states, the rapid growth and prevalence of chronic diet-related illnesses is costing us lives, quality of life and economic prosperity. In 2006, the total cost of diabetes for people in Virginia was estimated at \$4.4 billion.

This estimate includes medical costs in excess of \$2.8 billion attributed to diabetes, and lost productivity valued at \$1.6 billion (American Diabetes Association, 2008; 2011). Since these expenses are due to preventable diet-related illnesses, increasing access and consumption of fresh, healthy whole foods can help address the prevalence of these diseases and health

Two key tenets of the Virginia Farm to Table Plan are:

1. everyone should be educated about the social, economic and environmental importance of Virginia's food system, and
2. quality food should be affordable and accessible to everyone in Virginia regardless of their economic means.

care expenses. The state would also benefit from lower treatment costs and higher economic activity through time as individuals experience better health.

Virginia Tech's College of Agriculture and Life Sciences, Virginia State University, Virginia Cooperative Extension, The University of Virginia, and the Virginia Food System Council with all its participating organizations initiated the Virginia Farm to Table initiative in September 2010. The goal of the initiative was to strengthen Virginia's food system and economic future through the development of a comprehensive Virginia Farm to Table Plan that informs and integrates assessment, education, development of programs and infrastructure,

policy and funding recommendations to address key issues facing farmers, food entrepreneurs, and communities. A logic model was developed to guide the Virginia Farm to Table Plan development process.

Underlying assumptions and key tenets for the development of the Virginia Farm to Table Plan were that ongoing education of the social, environmental, and economic importance of Virginia's food system would be critical and that quality food should be affordable and accessible to everyone in Virginia regardless of their economic means. The Plan would directly address 1) local regional farm and food markets 2) agricultural economic

A Logic Model for the Virginia Farm to Table Plan

Goal of the Virginia Farm-to-Table Plan*

To strengthen Virginia's local food system and economic future through development of a comprehensive Virginia Farm-to-Table Plan that informs and integrates assessment, education, development of programs and infrastructure, policy and funding recommendations. The Plan directly addresses 1) local regional farm and food markets 2) agricultural economic development, 2) community viability, and 3) food access, nutrition and health.

Why develop a farm to table plan?

- Job loss and dwindling revenues
- Loss of farmland and working landscapes
- Increased suburban and urban growth and development
- Increased obesity and chronic diet-related diseases rates
- Rising costs of energy
- Increased natural resource degradation
- Loss and consolidation of small mid-sized farms

Virginia assets

- Strong historic and diverse agriculture
- Increased consumer demand
- Funding opportunities
- Mid-Atlantic geography and climate
- Community engagement (people, institutions, organizations)
- Proximity to urban and metropolitan centers

Inputs (What?)

- Structured planning
- Strategic coordination and pilot projects
- Examine of policy and regulatory change
- Research, education, and non-formal training programs
- Capital investment for local and regional food and farm infrastructure
- Consumer education and marketing

Strategies (How?)

- Engage and coordinate agencies, stakeholders and marketing programs at state and local levels
- Grow beginning and transitioning farmers and help secure prime farmland
- Provide education, information, training, and technical support to help farmers adopt ecologically-sound farming methods
- Expand producers' access to larger-scale local and institutional markets
- Support food systems infrastructure, business development, and community food enterprises
- Improve access to healthy, local food and grow electronic benefit transfer (EBT) farmers market programs
- Cultivate urban, school, and community food gardens
- Strengthen farm-to-school program and institutional market opportunities

Outputs (Short-term results)

- More farmers seeking to sell local and within state markets
- Local farm and food working groups and advisory councils
- Coordinated local food system policies and regulations
- Viable business models and public / private partnerships
- Statewide networks that expand reach and effectiveness of community-based initiatives
- Food system training programs that support teachers, extension agents, farmers and food entrepreneurs

Outcomes: (Short-term impacts)

- More fresh, healthy, local food widely sold to institutional, retail and food service markets
- More infrastructure and new businesses partnerships established
- A more supportive legislative and regulatory environment
- More demand for sustainable produced foods
- Better coordination of agency and educational institution local food efforts
- Supply and demand of sustainably produced food increasing in parallel

Outcomes: (Long-term impacts)

- Increased jobs within Virginia's farm and food economy
- Healthier Virginian's with reduced healthcare expenditures
- Increased food dollars spent locally supporting Virginia's rural communities
- Improved local waterways and environmental impacts
- Increased food dollars spent on locally grown and processed foods
- Farming widely respected as a skilled, satisfying and economically viable profession in Virginia

*Logic model adapted from North Carolina's From Farm to Fork Guide and Iowa's Local Food and Farm Plan.

Current Issues of Virginia's Food System

- There is unprecedented demand for locally identified Virginia foods. **Virginians spend \$19 billion annually on food purchases.**
- If each household in Virginia spent \$10 per week of their food budget on locally-grown food; \$1.65 billion would be generated annually in direct economic impact.
- Healthy soils, air, and water are essential to Virginia's food system.
- Of Virginia's 47,383 farmers, approximately 10,883 farms or roughly 25% of the farms have implemented some conservation measure on their farm.
- Virginia lost over 649,000 farm acres to development from 1997 to 2007.
- From 1997 to 2007, Virginia experienced a significant decline in the number of farms having between \$50,000 and less than \$499,999 of gross annual agricultural receipts.
- In 2011, U.S. farmers received only 12 cents of consumers' food dollar.
- Liquid fuels and fertilizer costs increased 81% and 65% in Virginia from 2002 to 2007.
- In 2007, the average value of products sold per farm in Virginia was \$61,334.
- In 2009, Virginia had an adult obesity rate of 25.5%.
- In 2006, the total cost of diabetes for people in Virginia was estimated at \$4.4 billion.
- In Virginia, 912,790 individuals are considered food insecure. Food insecurity among seniors and children is increasing.
- Child food insecurity in Virginia is 17.6%.
- Supplemental Nutrition Assistance Program (SNAP) monthly participation was projected to be 364,825 Virginia households in 2010.



Discussing market development at the Forum in Blacksburg.

development, 3) community viability and environmental stewardship, and 4) food access, nutrition and health.

At each stage of the development of the Virginia Farm to Table Plan, input was sought from a variety of stakeholders and the general public. To develop the recommendations, the Virginia Farm to Table Plan Team drew on the expertise and experience of more than 1,920 individuals across the Commonwealth who work in agriculture, aquaculture, fishing, education, finance, philanthropy, nutrition, community planning and economic development, land and natural resources conservation, public policy, local and state government, academics, and youth development.

Major areas and themes identified as challenges at the summits, listening sessions, and through secondary data research of Virginia's food system include:

- **Increasing education and direct outreach to consumers, farmers, underserved populations and public officials.** Because everyone needs to eat each day to thrive, the food system affects and touches everyone on a daily basis. Therefore, ongoing education and more direct engagement of consumers, farmers, underserved populations and policy makers about Virginia's food system will be important for market and policy decisions for long-term community economic development, environmental performance and improved health outcomes and social well-being.

Additionally, education about Virginia's food system should be for all people, from pre-Kindergarten to higher education to consumer and producer awareness.

- **Cultivating beginning farmers and farm workers for long-term agricultural economic vitality and stability.** Virginia, like many other states, is facing an aging farm population and a declining farm work force. The typical Virginia farmer is 58 years old, and faces a plethora of risks and challenges such as volatile markets, high feed and fuel prices, farm transition planning and new environmental requirements (USDA, National Agricultural Statistics Service, 2009a.). Even

for established farmers, off-farm income and employment that offers healthcare benefits is needed to support the farming operation. For beginning farmers, access to land, experience, and capital are all challenges to address and overcome if farming is to be a full-time profession and career.

- **Conserving and protecting prime agricultural soils and arable farmland.** Urban and suburban development continues to threaten prime agricultural soils and arable farmland in Virginia. From 1982 to 2007, about 7,500 acres of Virginia's prime agricultural land was developed annually. More recently, from 1997 to 2007, Virginia lost over 649,000 farm acres (USDA, National Agricultural Statistics Service, 2009b). This change and loss is an indicator of development pressure as well as long-term agricultural economic vitality. Once these agricultural soils and lands are developed or paved over, agricultural production opportunities cease and there is no turning back.
- **Encouraging food system planning in counties' and cities' economic development and comprehensive plans.** The concept of planning our farming and food system has been under-appreciated and at times overlooked in community planning. Planning must consider soils, water, and natural resources needed for farming and a robust food system, but also needs to consider clustering and networking of essential services and resources for a healthy and resilient food system. Once, communities realize that prime agriculture soils and land have been developed, it is certainly too late in the planning process.
- **Encouraging ecologically sound farming systems through greater participation and implementation of agricultural best management practices (BMPs), whole farm planning by farmers for comprehensive conservation and profitable management.** Healthy communities and a healthy environment are critical components for economic success and prosperity. Farmers value their soil and water resources; therefore, environmental stewardship of their land and Virginia's working landscapes is critical to long-term profitability and sustainability.

Agriculture and the Chesapeake Bay are two incredible assets for Virginia's economy, so balancing profitable land management and conservation practices is an ongoing need. Of Virginia's 47,400 farmers, approximately 10,883 farms or

roughly 25% of the farms have implemented some conservation measure on their farm. An additional 11,618 farms practice some form of rotational or management intensive grazing. Virginia farmers have made significant progress in protecting and conserving Virginia's natural resources, but broader participation is still needed moving forward to support agriculture and protect water quality (Virginia Farm Bureau Federation, 2009).

- **Addressing community food security, hunger, justice and public health issues.** Food is a basic necessity for life, but also for economic productivity and prosperity. And yet, many Virginians struggle to have access to an adequate supply of healthy food to lead an active productive life. Because of economic constraints, many Virginia households must choose between buying foods or paying for other basic household needs and bills like rent, electricity or medical. Virginia's food insecurity rate at 11.8% is below the national average, but 912,790 individuals are still considered food insecure (Feeding America, 2011).

Additionally, five counties and 5 cities have food insecurity rates of between 19 and 28%, which means 1 in 4 people in those communities does not know where the next meal may come from. For children, food insecurity is even more pronounced across the state with an overall child food insecurity rate of 17.6%. In a few Virginia counties, the childhood food insecurity rate approaches or exceeds 30% (Feeding America, 2011).

Food insecurity among seniors and vulnerable communities is a growing and urgent concern. According to Feeding America,

7.9 percent of households with seniors (2.3 million households) that they feed were food insecure. In 2010, 8.9 percent or 3.4 million older Americans were living below the poverty line. In addition, food insecure seniors were 2.33 times more likely to report fair to poor health status and had higher nutritional risk. Thirty percent of households with seniors that Feeding America serves indicated that they have had to choose between food and medical care and 35 percent had to choose between food and paying for heat or utilities.

As Virginia addresses these food and health concerns, it is important to realize the demographics of food insecurity among the elderly. Food insecurity among seniors is more likely if seniors live in a southern state; are younger; live with a grandchild; are African American; and are Hispanic.

Students enjoying a local harvest meal at Eastern Mennonite University.



Economic leakage simply means total sales and economic output within an area are not as much as they could be based on the area's population, income, capacity and existing resources.

be encouraged to participate in shaping the food system to better address local needs and optimize community resources. Therefore, more support and acknowledgement of past, current and future efforts at the local and regional level as well as the state will be needed. Additionally, the private sector (for profit and not-for profit) will continue to be a key partner and advocate for local food system activities and advancements.

To increase participation in the development of the Virginia Farm to Table Plan, an online survey instrument was designed and developed to further examine the assessment, education, development and policy needs across the state. Approximately 1,134 people, from 418 distinct zip codes, were surveyed about the needs for the development and advancement of Virginia's food system (Hightower and Benson, 2011). Through the survey instrument, an additional 34 distinct items were identified as challenges and priorities for advancing Virginia's farm to table efforts.

The Plan is the product of an inclusive and in-depth process of information gathering and research into issues facing farmers, food entrepreneurs, and communities, and engaging agencies, organizations and institutions. The initial draft recommendations were shared and vetted with representatives from 24 participating organizations and agencies on the Virginia Food System Council, along with participants in the summits, forums, and listening sessions.

The 38 recommendations focus on assessment, education, development, and policy related to four topic areas and overall implementation: 1) Business and Production Management, 2) Market Development, 3) Food System Planning, Management and Policy, 4) Food Security, Food Safety, Diet and Health, and 5) Implementing the Virginia Farm to Table Plan.

The assessment will set baseline data to develop an ongoing report card on Virginia's local food system. Educational efforts will build the awareness and knowledge of government officials, farmers, food entrepreneurs, consumers, and communities about the food system. Development will build capacity, programs and needed food system infrastructure. Policy will address obstacles and encourage local food system innovation and expansion.

During these tough financial times, on-going and concerted effort to address these farm-to-table recommendations will generate additional revenue, strengthen the state's economic future, and help the Commonwealth achieve the following goals, objectives, and outcomes:

- Encourage business development and expansion
- Create and maintain new jobs
- Incubate small and mid-sized processing and manufacturing enterprises
- Expand in-state and regional markets for locally-grown Virginia farm and food products
- Provide incentives for new and established farmers to invest in their farm and food production enterprises
- Enhance Virginians access to local food and farm markets regardless of economic means
- Improve food security in all Virginia households and communities
- Develop the programs and infrastructure needed to deliver more food from Virginia farms to market
- Address any policy or regulatory barriers that hinder local farm and food production
- Improve access to Virginia farm and food data for producers, consumers and agencies
- Encourage new farm start-ups, beginning farmers, and food entrepreneurship
- Improve health for Virginians and reduced diet-related health care costs for the state
- Promote a sound sustainable environment for long-term economic vitality and community viability
- Educate Virginians about the benefits of buying locally-grown Virginia farm and food products.

The Plan also highlights different local and regional farm-to-table initiatives that can serve as models, tools, communities of practices and/or case studies for further developing and expanding of Virginia's food system. In collaborating and coordinating to implement this Plan, we will grow jobs and new entrepreneurs, encourage durable local and regional economic development around farming and food, maintain farmland and working landscapes, improve public health, increase food security, eliminate rural and urban food deserts, strengthen community viability for a stronger food system and brighter economic future.

“Liquid fuels and fertilizer costs increased 81% and 65%, respectively, in Virginia from 2002 to 2007. And this increase was prior to the major increase in the price of fuel in 2008.”

~ USDA, Agricultural Census 2007.a

Virginia Farm to Table Plan

Introduction

Virginia's overall food system directly impacts the survival and viability of farms and farmland; the economic development of rural and urban communities; the care, restoration and resilience of ecological resources; and critical health issues. Within this context, there are a multitude of economic, environmental, and social challenges that Virginia farmers, agriculture, and communities are currently facing. The recent economic downturn and prolonged recession has resulted in increasing discussions of agricultural economic vitality, community viability and overall quality of life at local, regional, state, and national levels. Many Virginia farmers, particularly small and mid-sized, are struggling to survive financially as they try to maintain and gain leverage and position in changing and volatile food markets.

Additionally, there are growing environmental concerns, challenges, and constraints facing Virginia farmers related to water quality and the restoration of the Chesapeake Bay Watershed and its tributaries, making their survival and future even more tenuous.

Beyond agriculture, communities – small and large – are struggling with dwindling revenues that force difficult decisions about which services should be funded. There are also numerous other issues that ultimately influence the viability of communities, including increasing healthcare costs, particularly as the incidence and cost of diet-related diseases like obesity and diabetes have grown over the past decades.

Social, economic and environmental challenges and obstacles facing Virginia communities include the following:

- Job loss and dwindling revenue streams
- Increase in environmental constraints
- Decline in rural community vitality
- Loss of small and mid-sized farmers
- Loss of farmland and working landscapes
- Rise in obesity and diet-related chronic diseases
- Urban and suburban encroachment.

Available assets and resources for most farmers and communities to address some of these obstacles and challenges

include the following:

- Diverse agricultural base and climate
- Natural capital and ecological resources
- Unprecedented consumer demand
- Community and institutional awareness
- Strong educational and health network
- Proximity to diverse markets and populations
- Skilled labor force and instruction.

Despite these challenges, there are assets and resources that can be mobilized within the Virginia landscape to strengthen and enhance the resilience and sustainability of Virginia's

food system and ecological resources.

Traditionally in tough financial times, new opportunities and paradigms emerge. This has been evident with the growing 'local foods' movement taking place nationally and emerging in numerous communities in Virginia.

In 2008, local food sales exceeded \$4.8 billion in the U.S. (Low and Vogel, 2011). Local food systems help support small and medium farmers who contribute an important dynamic in communities, help sustain ecological resources and are a critical segment of Virginia's food and farming industry. Local food systems also increase local revenue, while connecting

producers with consumers.

Public interest in looking at the food system more comprehensively and holistically has increased nationally and has been a central conversation in many communities throughout Virginia. Hamm (2009) states a healthy food system that is vibrant, regenerative and growing is predicated on having farming operations of diverse scales and production methods. Within this framework, a key principle is that not all food improves human health and a healthy food system should increase the availability and access of healthy food options. However, no matter the scale of the operation, one strategy identified for addressing the complex and evolving issues and challenges facing agriculture, while aiding community economies, enhancing ecological resources, improving nutritional status and health, and increasing food availability and accessibility is encouraging the development of more locally-integrated community-based food systems.

“The family farm is struggling in this economy to make ends meet.”

~ Kathleen Merrigan, U.S. Deputy Secretary of Agriculture at the 2nd Virginia Food Security Summit Virginia farmer

Community-based food systems that emphasize a sense of place and local identity are socially embedded, economically invested, and integrated across food production, processing, distribution, consumption, and waste disposal. They can also enhance the economic, social environmental and nutritional health of a particular place (Garrett & Feenstra, 1999).

Virginia agriculture is the foundation of the Virginia food and farming system, but agriculture is certainly not one-size-fits-all. To remain viable and profitable, farmers of all sizes and production types need alternative profitable markets and marketing strategies to distinguish and differentiate their businesses and farm products in the marketplace. An opportunity to strengthen Virginia agriculture and provide significant economic development is to encourage the production and consumption of local and regionally produced and identified food to retain more of the food dollar for Virginia farmers.

Why a Virginia Farm to Table Plan?

The Virginia Farm to Table Plan is a collaborative effort to strengthen Virginia's economic future and food system from the farm to the table. The social and economic importance of farming and food is often overlooked and under-appreciated by individuals and communities. Farming and food are fundamental necessities for individuals and communities to thrive socially and economically. Strong communities and local economies ensure a strong state economy.

Within the context of community economic development, food and farming can often be overlooked as an asset for economic recovery, community planning and future economic development. And yet, the food and farming system is directly related to:



Developing new markets and beginning farmers.

- Financial well-being of producers, consumers, and communities.
- Social and economic development.
- Nutrition, education, and critical health issues.
- Working landscapes and the natural environment.
- Local identity, history, and culture.
- People's values and society's policies.
- Overall rural and urban quality of life.

Additionally, food and farming can encourage community resilience and improve public health for the common wealth and common good.

Virginia has experienced significant growth in the state's local food system. Yet, there are remaining barriers and challenges to Virginia's farmers trying to market to local and regional business sectors (related to: crop and livestock production, processing, aggregation and distribution, financial assistance, marketing and market venues, food safety and regulations, infrastructure and planning, and consumer education).

Considerably more work exists to train beginning farmers and food entrepreneurs, develop processing, aggregation, and distribution infrastructure, open larger volume institutional markets like schools, universities and hospitals for Virginia farmers, and improve access to healthy foods in neighborhoods and communities throughout the state.

Virginia was recently been recognized as an emerging leader in the U.S.' local food movement (Denckla Cobb, 2011). However, concerted effort to develop and strengthen Virginia's local farm and food system can generate additional revenue, strengthen the state's economic future, and help achieve the following goals, objectives and outcomes:

- Encourage business development and expansion
- Create and maintain new jobs
- Incubate small and mid-sized processing and manufacturing enterprises
- Expand in-state and regional markets for locally-grown Virginia farm and food products
- Provide incentives for new and established farmers to invest in their farm and food production enterprises
- Enhance Virginians access to local food and farm markets
- Improve food security in all Virginia households and communities
- Develop the programs and infrastructure needed to deliver more food from Virginia farms to market

- Address any policy or regulatory barriers that hinder local farm and food production
- Improve access to Virginia farm and food data for producers, consumers and agencies
- Encourage new farm start-ups and beginning farmers
- Improve health for Virginians and reduced diet-related health care costs for the state
- Promote a sound environment for long-term economic vitality and community viability
- Educate Virginians about the benefits of buying locally-grown Virginia farm and food products.

The overall goals and objectives of the Virginia Farm to Table Plan fit well with the state's goals for economic vitality and the missions of Virginia Tech's College of Agriculture and Life Sciences, Virginia State University, Virginia Cooperative Extension, University of Virginia, and the Virginia Food System Council with all its participating organizations. The Plan also encourages multi-sector collaboration and coordination with agencies and institutions across the state and in localities to address these food system-related issues and recommendations.

Virginia Tech's College of Agriculture and Life Sciences (CALs) and Virginia State University each work to serve and strengthen Virginia's diverse agricultural industry and farming community. Virginia Cooperative Extension (VCE) as a partnership of these two universities helps to provide credible information, education and tools for people and communities to utilize to improve their quality of life. A growing area of extension education programming and research has focused on local foods,

community food systems, and food enterprise development as a sound asset-based social and economic development strategy for rural and urban communities that also gives greater visibility to local agriculture and builds community connections.

VT-CALS and its faculty are well-positioned, particularly with the development of VCE's recent strategic plan, to address the current and future economic, environmental, social, and health challenges facing Virginia farmers and communities. Food and the farming system is integrally related to diet quality, health, wealth and viability of farms and communities, therefore, a truly integrated multi-disciplinary capacity-building approach is needed moving forward to strengthen Virginia's food and farming system.

The recent National Institute of Food and Agriculture – Agriculture and Food Research Initiative (NIFA-AFRI) proposal, Enhancing Food Security by Cultivating Resilient Food Systems and Communities, obtained by faculty of Virginia Tech's College of Agriculture and Life Sciences is one example of integrating research, extension, teaching and service learning to address pressing societal issues. The new CALS minor, Civic Agriculture and Food Systems, an outcome of the USDA Challenge grant "Restoring Community Foodsheds," exemplifies multidisciplinary commitment and offers students the opportunity to observe how agriculture, human nutrition and health, and community development are related. The Virginia-North Carolina Cooperative Extension Community Food System Explorer project (www.cfse.ext.vt.edu), sponsored by USDA's Sustainable Agriculture Research and Education (SARE) program is another example of joint collaboration and a resource for food system assessment from field to fork.

Specific Goals of the Virginia Food System Council

- Advancing a sustainable food system in Virginia that improves health outcomes, economic development, environmental quality and social well-being.
- Enhancing farm profitability and viability through more successful linkages between food producers and consumers including the development of opportunities for Virginia farmers and processors to access new large-volume markets like schools, universities, hospitals, and other institutions.
- Protecting and restoring natural resources, sustaining vital agricultural communities, and preserving arable farmland as critical foundations of the food supply.
- Developing coherent policies and infrastructure to ensure a broad-based, diverse, competitive food system that serves the needs of farmers of all scales and the civic interests of rural and urban communities.
- Educating Virginia residents of all income levels about the social, economic, environmental, nutritional and health benefits of purchasing locally-grown food, while supporting community-based agriculture.
- Fostering broader collaboration and served to incubate additional community-based initiatives and among participating organizations.

The University of Virginia (UVA) Food Collaborative works to promote research, teaching, and community engagement in pursuit of more sustainable and place-based food systems. The Collaborative includes faculty, staff and students and is constituted both through its multidisciplinary membership and its engagement with community members and practitioners. While public debate about the relationships between environmental sustainability, regional food, land use, and resource management has proliferated in the last decade, work on-the-ground to establish and research the long-term validity of new food systems remains disparate and diffuse. The UVA Collaborative provides a specific focus for university and community efforts to study and improve local and regional food systems. The goal of the UVA Food Collaborative is to make the University of Virginia a nationally recognized for its research and training into building more regionally sustainable foodsheds (University of Virginia, 2011).

The Virginia Food System Council is a 501c (3) non-profit organization that was established as a direct result of the 2007 Virginia Food Security Summit that was jointly sponsored by the University of Virginia and Virginia Tech (Bedarf, 2007). The mission of the Council with its 24 participating organizations is to advance a nutrient-rich and safe food system for Virginians at all income levels, with an emphasis on access to local food, successful linkages between food producers and consumers, and a healthy viable future for Virginia's farmers and farmland. In the early development of the Council, a state-wide assessment and plan was identified as an urgent need and method for better understanding the issues facing farmers, food entrepreneurs and communities across the state.

In undertaking the development of the Virginia Farm to Table Plan, we hope to encourage broader multi-sector and institutional collaboration around Virginia's food system as well as reconnect individuals and communities to local farming and food. The Plan highlights the social and economic importance and value of these connections to commerce; builds greater awareness of Virginia's local food system and emerging enterprises; examines the challenges, but more pressingly provides recommendations to create jobs, encourage new business development and expansion, enhance food security, and promote long-term sustainable economic recovery and stability for communities and the state economy.



Assets for a Strong Local Food System and Economic Future

The Virginia Farm to Table Plan is an effort to address the emerging challenges and opportunities facing Virginia agriculture and communities. Outside economic pressures may predominate and change is inevitable, but Virginia is fortunate to have many assets and resources to draw upon to meet the challenges and seize the economic and community development opportunities. The aim of the Virginia Farm to Table Plan is not to propose recommendations that will compete with existing efforts but rather is a call for leveraging assets and building the capacity of those agencies, organizations and businesses that are already leading the way in addressing the challenges and seizing the opportunity.

Virginia's rich agricultural and entrepreneurial tradition is an incredible asset and resource for developing the state's local food system. Presently, Virginia has more than 47,300 full or part-time farmers. Of these farmers, approximately 98 percent are family-owned and operated so Virginia is well-positioned for stronger local and regional farm and food commerce, particularly since Virginia is located within a leisurely day's drive of 60% of the U.S. population and consumer markets. The state also benefits from

many other assets and resources. The statewide population grew more than 13% from 2000 to 2010. During the same time period, the population of Northern Virginia grew nearly twice as fast as the rest of the state. Within the context of food and farm commerce, Virginia's population represents a huge potential consumer market with over 8.1 million people and challenge to ensure everyone has access to adequate supply of fresh, healthy nutritious food all the time.

However, the diversity of Virginia's agriculture is an incredible asset for capitalizing on this market and addressing the challenge of feeding more than 8 million people. The state's agricultural diversity results the state's five distinct physiographic provinces (i.e., Appalachian Plateau, Valley and Ridge, Blue Ridge, Piedmont, and Coastal Plain), and six climatic divisions. Within these provinces and zones, annual rainfall varies from a semi-arid thirty-five inches in the Shenandoah Valley to more than sixty inches in southwestern Virginia. These climatic variations in the state provide a tremendous opportunity for growing a wide variety of distinct place-based foods and farm products.

The Chesapeake Bay and the Atlantic Ocean are sometimes overlooked for their significant contribution and value to Virginia's food system; however, the Chesapeake Bay and

access to the Atlantic Ocean add tremendously to the diversity and breadth of Virginia's food system. According to the Virginia Department of Agriculture and Consumer Services, Virginia is the nation's third largest seafood producer and the largest on America's Atlantic coast. The annual economic impact of Virginia's seafood industry is estimated by the Virginia Institute of Marine Science (VIMS) to be over \$500 million dollars. Commercially valuable and prominent species include sea scallops, blue crabs, oysters, striped bass, summer flounder, croaker, spot and clams, which Virginia's watermen harvest from 620,000 acres of water.

Assets from a Virginia food retail perspective include 467 specialized food stores, 1,519 grocery stores, 4,002 convenience stores, 6 co-packing facilities, and 135 community supported agriculture (CSAs) operations. From a wholesale perspective, Virginia has 4 shipping point farmers markets, 60 fruit and vegetable wholesalers, and approximately 18 food hub models for aggregation and distribution.

Other assets and potential markets for locally-grown Virginia food and farm products are Virginia's 1,708 museums, 77 local hospitals, 77 certified nursing homes and assisted living centers, 14 food banks, 6,386 childcare programs, universities and numerous state agencies (Benson and Hightower, 2011).

Virginia has many additional assets that can be advantageous moving forward in developing and strengthening local food systems including an abundance of organizational and financial support, agribusiness infrastructure, farmland and soils, transportation, agricultural heritage and culture.

What is a Food System?

Food is fundamental to life and sustenance; everyone needs to eat each day to lead an active life and thrive physically, mentally and socially. The food system permeates everyone's lives on a daily basis. However, we often take food and where it comes from for granted. People rarely evaluate the food system holistically and comprehensively from the farm to the table.

Public interest in looking at the food system more comprehensively and holistically has increased nationally and has been a central conversation in many communities throughout Virginia. Hamm (2009) states a healthy food system that is vibrant, regenerative and growing is predicated on having farming operations of diverse scales and production methods.

The Virginia Farm to Table Plan is an attempt to look at the local and regional food system comprehensively and holistically.



Figure 2. The support system and interrelated connections of a community-based food system from farm-to-table (Bendfeldt et al. 2011).

A food system is defined as the production, processing, distribution, sales, purchasing, preparation, consumption, and waste disposal pathways of food. Local refers specifically to the pathways that occur in Virginia. Within each of these sectors and pathways, there are opportunities for job creation, business incubation and expansion, health promotion, improved access, environmental stewardship and economic success (Figure 2.).

Bendfeldt et al. (2011) state that a strong food and farm system should:

1. Advance the health and well-being of the population;
2. Improve the local community's economic wealth and vitality;
3. Increase connections and opportunities to improve food access and meet demand; and
4. Enhance the capacity to produce, process, distribute, and consume food locally and regionally.

Emergence of Local Foods

Local food has generated a lot of interest and garnered much media attention over the last five years. The concept of monitoring food miles and the publication of the 100-Mile Diet encouraged many people to consider local to be within a 100 to 125-mile radius. Nutritionist Joan Dye Gussow, and author of *This Organic Life*, suggested trying to buy food produced within a day's leisurely drive of our homes as a way to conserve land and maintain a living countryside (Halweil, 2004.). The Virginia Farm to Table Plan defines local as Virginia grown and produced farm and food products. Localities may be adjoin neighboring states and food sales may occur across borders, but the focus of the Plan is on Virginia-based food and farm products.

Although there does not appear to be consensus on the exact definition of local, Martinez et al. (2010), as part of a literature review, found that consumers and retailers purchase locally produced food for the following reasons:

- Perceived product quality and safety
- Perceived freshness and taste
- To support local producers and businesses with their food dollars
- To know the source and story of their food
- Perceived greater nutritional value
- Desire to support sustainable environmental practices in their community
- To interact with producers and the market experience
- To obtain variety and niche foods
- To buy food at a low price and good value

Buy Fresh Buy Local in Virginia

Buy Fresh Buy Local is national network coordinated by the Food Routes Network, a non-profit organization based in Pennsylvania. Since 2007, Virginia has experienced significant growth in regional Buy Fresh Buy Local chapters. Today, Virginia is fortunate to have 9 regional Buy Fresh Buy Local chapters throughout the state. Because of its recent growth of Buy Fresh Buy Local chapters, Virginia was selected by the Food Routes Network as the host state for the 2010 National Gathering.

Local and regional chapters work within the community to involve more consumers in the revitalization of our local food systems. The goal of each chapter is to help consumers find freshest, most delicious locally grown food and farm products while building relationships between growers, food artisans, farmers' markets, retailers, restaurants, and institutions (www.buylocalvirginia.org).



Within the same USDA study by Martinez et al. (2011), consumers cited the following obstacles for not buying locally-grown food:

- Lack of awareness and knowledge of existing local food markets
- Inconvenience, inaccessibility, and lack of proximity to local food markets
- Perception that local foods are higher priced whether perceived or actual
- Lack of variety and insufficient volume on a consistent basis.

Community health professionals advocate and emphasize that not all food improves human health and fruits, vegetables, whole grains and foods should be part of a local food system to address community health issues such as obesity, diabetes and other diet-related diseases (Center for Disease Control, 2010). While many business and economic development professionals are considering local from an import replacement and substitute perspective.

Denckla Cobb (2011) notes the local food movement is not a simple, one-dimensional passing fad, but is complex, multi-dimensional and can be integrated into Virginia's long-term legal framework, economic development and social fabric.

The vitality of the local and regional food system is foundational to durable community economic development and a key indicator of the social and economic well-being of a community and region. However, the local and regional food system is sometimes not recognized or appreciated as a key asset and strategy for community development that builds health, wealth, connection and capacity where food is produced (Meter 2011; Bendfeldt et al., 2011).

Because the food system is so closely interconnected to the production, processing, distribution, sales, purchasing, preparation, consumption, and waste disposal pathways of food, its significance for economic vitality and community viability of Virginia and a particular place cannot be overstated. Additionally, a local and regional food system is directly connected to community and social viability, environmental stewardship, the viability of small- and medium-scale farms, farmland protection, the health of individuals, and overall food security (Bendfeldt et al., 2011)

From an asset-based, community economic development perspective, the local food system builds on local needs, resources, design, investment, and control. Whatever the perspective on local is, strong local economies ensure a strong

state economy. However, farmers, food entrepreneurs and communities cannot do it alone and need a support system that is connected and coordinated to succeed long-term (Figure 2.).

Market Demand and the Opportunity

The fundamental opportunity for Virginia is to harness consumer spending on Virginia's farm products and foods to enhance the long-term profitability and sustainability of local farms, fisheries, and food-based enterprises. The demand for locally grown and regionally identified food is unprecedented and has increased significantly across the country and Virginia. The Virginia Farm to Table Plan seeks to enhance the competitive advantage of Virginia farmers so they can compete and excel in local markets.

The number of farmers markets operating across the country has increased from 340 in 1970 to more than 7,175 today. The U.S. Department of Agriculture estimates that more than 136,800 farms currently sell their food products directly to consumers. In 2011 the U.S. experienced a 17% increase in the number of farmers markets from the previous year (O'Hara, 2011; USDA, 2011). Wholesale local food sales were \$4.8 billion in 2008, and expected to be valued at more than \$7 billion in 2011 (USDA, Economic Research Service, 2011.).

Virginia experienced a 13% increase in the number of farms selling direct to consumers from 2002 to 2007. The value of these direct-to-consumer sales increased 72% over the same time period, from \$16.8 million to 28.9 million. Today, Virginia has over 200 farmers markets and 135 Community Supported Agriculture (CSAs) operations and the number continues to grow.

Building Understanding of Virginia's Food System

To plan and build for the future, it is necessary to assess the current situation and understand Virginia's agricultural industry and food system moving forward. As mentioned previously, Virginia's agricultural industry is very diverse and a major challenge is feeding a population of more than 8 million people and improving the access of a local food system for all Virginians.

In developing the Virginia Farm to Table Plan, the team has researched publicly available data sources to examine food and farm system trends through time. There is much to celebrate and build upon within Virginia's food and farm system. In examining Virginia's food system, it is important to look at the connections and relationships of farms, food, economics, communities,

“Farming looks mighty easy when your plow is a pencil and you're a thousand miles from the corn field.” ~

Dwight D. Eisenhower, 34th President of the United States and cattle farmer.

environment and health. Some data indicate positive trends to be accentuated and other trends that indicate areas to focus on and improve through concerted educational programming, development and infrastructural improvements, and strategic policies.

Characteristics of Virginia Agriculture

Agriculture in Virginia is historically and economically significant. With less than 2% of the U.S. population working in production agriculture and the vast majority of people being one or two generations removed from farming, it is easy to forget about the significance of agriculture. The importance and value of agriculture as the largest industry in Virginia is tremendous and cannot be overstated. The annual economic impact of agriculture is estimated to be \$55 billion, which supports more than 357,000 jobs across the state. In 2007, production agriculture generated approximately \$2.9 billion in agricultural receipts at the farm gate. This production output provides employment for 60,000 farmers and farm workers (University of Virginia, 2008).



Strengthening the viability of fisheries and aquaculture, while protecting communities and the Chesapeake Bay.

Season Extension for Market Development and Food Security

Virginia is geographically diverse and uniquely situated to utilize and benefit from season extenders like cold frames, hot beds, cloches, row covers, hoop houses, high tunnels and greenhouses. Enhancing year-round availability and access to healthy nutritious food in Virginia is an important goal of the Virginia Farm to Table Plan for market development and improved food security. For Virginia farmers, market gardeners, and home gardeners to get the most out of their truck patches and gardens, farmers and gardeners can extend the growing season by sheltering their plants from harsh weather and frosts in early spring and the fall. Winter greens, squashes and other cool-weather crops can be harvested and stored all winter by providing the right conditions of shelter, light and insulation. There are many different techniques for extending the growing season and getting an early start on the market for vegetables like tomatoes and corn. The economics and energy requirements of season extension techniques always have to be considered. All season extension techniques require inputs of energy and other resources to yield extra production so inputs and costs have to be balanced with expectations. However, with the market demand for fresh local-grown Virginia foods and farm products and the increase in the number of households that are considered food insecure in Virginia, improving and expanding the use of season extenders will continue to be critical for overall market development and improved food security for Virginia.

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Virginia's agricultural industry is very diverse and ranked prominently in the top 10 in U.S. production for tomatoes, apples, potatoes, grapes, snap beans, cucumbers, turkeys and broilers. A list of Virginia's Top 20 Agricultural Crops and Livestock is in Appendix A.

Virginia is fortunate to have 47,383 farms. The average age of Virginia farmers is 58 years old. The average farm size is 171 acres and farmland covers over 8.1 million acres in the Commonwealth, or approximately 32% of the land area. Women are the principal operators for 14% of the farms in Virginia. There are more than 4,000 limited resource farmers in Virginia. In 2007, the average value of products sold per farm in Virginia was \$61,334.

An important component of local and direct to consumer sales has been certified and exempt organic farming. Organic agriculture continues to be one of the fastest growing segments of agriculture in the U.S. According to the Organic Trade Association, the organic industry continues to grow at a rate of more than 15 percent annually.

In 2008, there were 14,540 organic farms and ranches in the U.S. These certified and exempt organic farms comprised 4.1 million acres of land and had \$3.16 billion in total sales. Additionally, organic farms in the U.S. had average annual sales of \$217,675 compared to the \$137,807 average for U.S. farms overall (USDA, 2009a). It should also be noted that average production costs are generally higher for organic farms than for other farms.

Virginia has experienced continued growth with organic farm production over the past 10 years. Although average sales for organic farms in Virginia are lower than the national average because of the size and scale of the in-state operations, there continues to be interest in organic production among beginning and established farmers and ranchers. The average age of organic farmers is 53 compared to 58 for typical Virginia farmers. In 2007, the total amount of land used for organic production in Virginia was 13,502 acres.



Table 1. Farm by size and production method.

Farms by Size	Non-Organic	Organic
1 to 9 acres	3,530	157
10 to 49 acres	15,177	98
50 to 179 acres	17,589	36
180 to 499 acres	7,777	16
500 to 999 acres	1,985	4
1,000 to 1,999 acres	960	0
2,000 acres or more	365	0

Farm Inputs

Although agricultural output was \$2.9 billion in farm receipts in 2007; Virginia farmers spent over \$2.7 billion on farm inputs (i.e., feed, labor, seed, equipment, fertilizer, fuel and oils). Animal feed purchased constituted 27% (\$727 million) of total farm production costs, with hired labor (\$294 million) and liquid fuels (\$157 million) making up an additional 17% of costs. Liquid fuels and fertilizer costs increased 81% and 65%, respectively, in Virginia from 2002 to 2007. And this increase was prior to the major increase in the price of fuel in 2008.

With rising costs for feed, labor, fertilizer and other inputs, profit margins for farmers are extremely thin; particularly when less than 12 cents of every consumer dollar spent on food goes to the farmer. Therefore, farm viability and financial profitability can be very tenuous. The majority of Virginia farms in 2007, approximately 41,800, grossed less the \$50,000 in agricultural receipts so limiting farm input costs is critical to remain profitable long-term.

Changing Demographics – Loss of Small and Mid-sized Farms

Small to mid-sized farms represent an important dynamic in communities, and are a critical segment of Virginia's food and farming industry. And yet, Virginia experienced a significant decline (i.e., 10 and 23%) in the number of farms having between \$50,000 and less than \$499,999 of gross annual agricultural receipts from 1997 to 2007. The loss of these farms changes landscapes, jeopardizes the future productive capacity of land, threatens our food security, and the health of rural and urban communities. The tenuous nature of farming and agriculture can be examined by looking at the changing demographics of Virginia farm numbers by sales category and farm size from through time.

Virginia agriculture provides many other benefits to communities and the state in addition to these economic

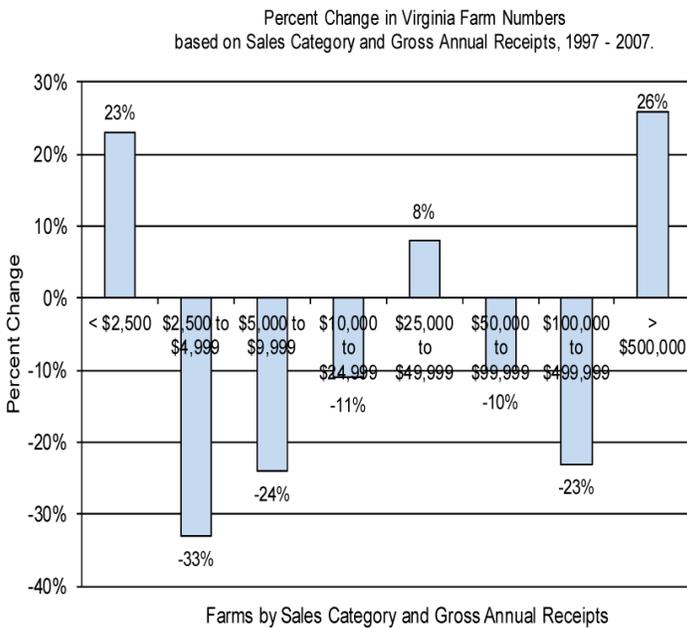


Figure 3. Farm number from 1997 to 2007 by farm sales category.

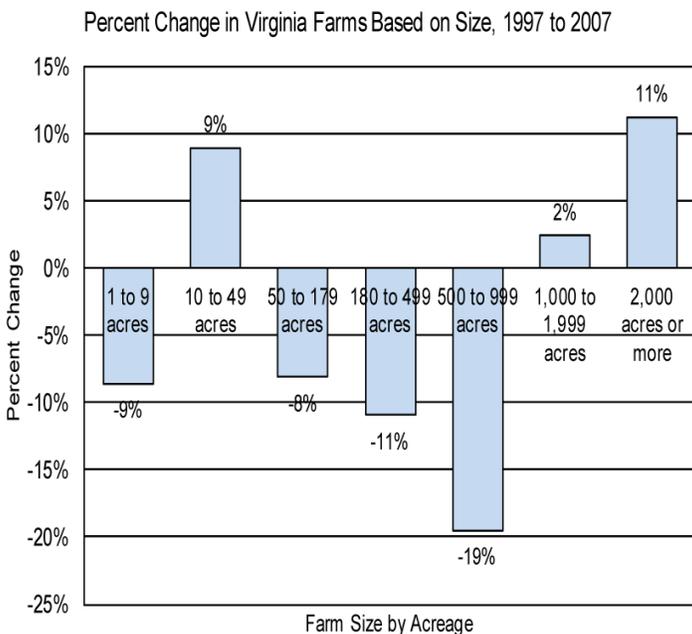


Figure 4. Farm numbers in Virginia from 1997 to 2007 by farm size.

benefits including open working landscapes; a strong moral and work ethic; better human health and diet; environmental stewardship; reduction of greenhouse gases; sequestration of carbon; wildlife habitat; and biological diversity. Therefore, development of beginning farm and farm worker programs, along with ongoing protection of farmland and arable land, is critically important to Virginia’s economic future.

Food, Health and Hunger

Many Virginians are one or two generations removed from farming and actual food production so it is easy to take where food comes from for granted. However, the relationship of food, health, and hunger has become a central conversation nationally and in many communities across Virginia, with common discussion on how we grow and raise, distribute and sell, prepare and eat our food. Many people are beginning to view food as more than a basic fuel source, but as essential component of individual and community health and wholeness.

U.S. agriculture has become extremely efficient over the past 60 years. In 1950, farmers received approximately 41 cents of retail prices paid by consumers (Meter, 2011). Today, in 2011, less than 12 cents of every consumer dollar spent on food goes to the farmer (USDA, 2009). This is quite an accomplishment as far as efficiency, but also makes it difficult for rural communities and economies dependent on the prosperity and survival of small and mid-sized farms.

The efficiency of agriculture has reduced the cost of food through time, but the amount spent on health care costs has climbed at the same time. In 1960, U.S. households spent 18 percent of their take home pay on food and 5 percent on health care. Today, households spend 9 percent of their take home pay on food and close to 17 percent on health care, which makes some people question the quality and nutrition of the food people are consuming.

The incidence of obesity and diabetes is used by health professionals as an indicator and measure of wellness in relation to food consumption and general health. In the past ten years, the prevalence of obesity in Virginia increased from 19.3 to 25.5% of the population. According to Virginia Performs, Virginia had the 16th lowest adult obesity rate in the U.S. in 2009. Virginia had an adult obesity rate of 25.5 percent, which was below the national average of 26.9 percent. Figure 5 shows the adult obesity rates for Virginia compared to surrounding states.

In looking at the incidence and impact of obesity on youth in Virginia in 2007, 31 percent of children and youth ages 10 to 17 were obese. According to the 2007 National Survey of Children’s Health, the national average for childhood obesity was 31.6 percent, which put Virginia just below the average.

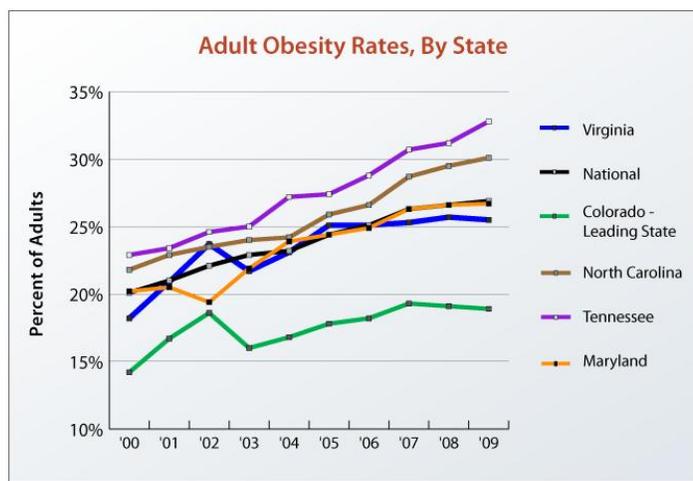


Figure 5. Adult obesity rates by state from 2000 to 2009.

Even though these obesity rates are lower than many other states, the rapid growth and prevalence of chronic diet-related illnesses is costing Virginia in lives, as well as decreased quality of life and economic prosperity. In 2006, the total cost of diabetes for people in Virginia was estimated at \$4.4 billion. This estimate includes medical costs in excess of \$2.8 billion attributed to diabetes, and lost productivity valued at \$1.6 billion (American Diabetes Association, 2008; 2011).

Since these expenses are due to preventable diet-related illnesses, increasing access and consumption of fresh, healthy whole foods could help address the prevalence of these diseases and health care expenses. The state would also potentially benefit from lower treatment costs and higher economic activity through time as the state concurrently addresses employment and income opportunities in communities most affected by the economic downturn.

Hunger and the incidence of food insecurity in Virginia is a critical concern for food system advancement. Incidences of hunger and food insecurity are compounded by prolonged economic recession and continued job losses. The U.S. Department of Agriculture defines food insecurity as a lack of access, at times, to enough food to lead an active, healthy life for all household members and limited or uncertain availability of nutritionally adequate foods.

USDA points out food insecure households are not necessarily food insecure or affected by hunger all the time. However, food insecurity closely reflects the reality of a household's need to make decisions or economic trade-offs between buying nutritional adequate foods and other important basic household needs such as housing, electricity or medical care.

Virginia's food insecurity rate is below the national average at 11.8 percent, but that still means more than 912,000 people in the state are food insecure. Within Virginia's food insecure population, 40 percent have income below the Supplemental

Nutrition Assistance Program (SNAP) threshold of 130% poverty; 19% have income between 103-185% poverty.

Additionally, five counties and 5 cities within Virginia have food insecurity rates of between 19 and 28%, which means 1 in 4 people in those communities does not know where the next meal may come from. For children, food insecurity is even more pronounced across the state with an overall child food insecurity rate of 17.6% or 321,490 children. Among food insecure children, 57% are income eligible nutrition programs where incomes are at or below 185% poverty. With a few Virginia counties, the childhood food insecurity rate approaches or exceeds 30% (Feeding America, 2011).

The economic downturn has dramatically compounded households' need for supplemental nutrition assistance. In 2006, 224,843 households across Virginia participated monthly in the SNAP program. Monthly participation for SNAP in 2010 is projected to be 364,825 households.

For these Virginians, SNAP provides a needed safety net against hunger. Virginia is also fortunate to have one of the U.S.'s largest gleaning networks operated and coordinated by the Society of St. Andrew. As the coordinator of the Virginia Gleaning Network, the Society of St. Andrew coordinates thousands of volunteers in six local areas to enter farm fields after farmers have finished harvesting and pick up tons of edible fruits and vegetables that have been left behind.

Through this statewide, volunteer driven Gleaning Network, the Society of St. Andrew has salvaged and delivered more than 22 million pounds of edible potatoes and produce to the needy in Virginia. The Potato and Produce Gleaning Project has provided over 67 million servings of food to Virginia's hungry and food insecure households (Society of St. Andrew Virginia, 2011).

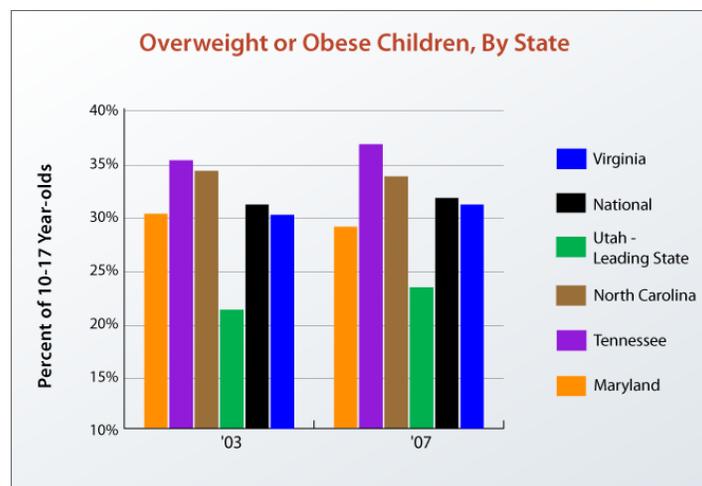
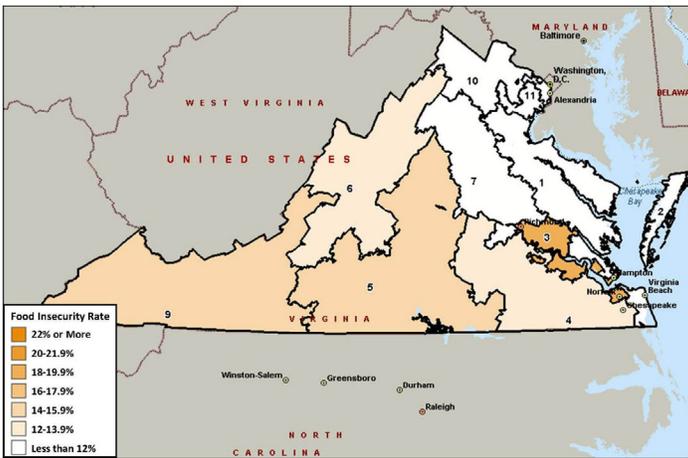


Figure 6. Percent of overweight or obese children for Virginia and surrounding states.



Map the Meal Gap 2011

Virginia Food Insecurity by Congressional District, 2009



Within the context of food, health and hunger, other opportunities for food diversion and recovery exist. In 1999, USDA estimated that more than 96 million pounds of edible food went to waste, which has an economic, social and environmental cost particularly as many households struggle with food insecurity.

Soils, Water, Food Waste, Energy and the Environment

Healthy communities and a healthy environment are critical components for economic success and prosperity. Conserving and protecting prime agricultural soils and farmland is critical

to a healthy, vibrant, resilient food system in Virginia. And yet, urban and suburban development continues to threaten prime agricultural soils and arable farmland in Virginia. As previously mentioned, Virginia lost over 649,000 farm acres from 1997 to 2007.

On average about 7,500 acres of prime agricultural land are developed annually in Virginia. This change and loss is an indicator of development pressure and does not bode well for the prospect for long-term agricultural economic vitality in Virginia. Once these agricultural soils are developed or paved over, agricultural production opportunities cease and there is no turning back.

Farmers value their soil and water resources; therefore, environmental stewardship of their land and Virginia’s working landscapes is critical to long-term profitability and sustainability. Agriculture and the Chesapeake Bay are two incredible valuable assets for Virginia’s economy so balancing profitable land management and conservation practices is an ongoing need.

Of Virginia’s 47,383 farmers, approximately 10,883 farms or roughly 25% of the farms have implemented some conservation measure on their farm. An additional 11,618 farms practice some form of rotational or management intensive grazing.

Virginia farmers have made significant progress in protecting and conserving Virginia’s natural resources, and these estimates may not include all soil and water conservation practices voluntarily installed on farms. However, the percentage of participation indicates broader participation in soil and water conservation programs and on-the-ground implementation is still needed moving forward.

Farmland Classification for Virginia

Based on the merged SSURGO Database

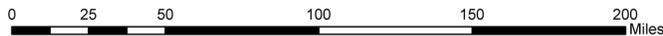


Legend

- Virginia County / City Boundaries
- Prime Farmland Classes**
- Data Currently not Available or Not Rated
- All areas are prime farmland
- Farmland of statewide importance
- Not prime farmland
- Prime farmland if drained
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if protected from flooding or not frequently flooded during the growing season



This map was produced by the USDA-Natural Resources Conservation Service 11-10-2011.



Virginia Gleaning Network, a program of the Society of St. Andrew

The Society of St. Andrew works to provide nutritious, healthy foods to Virginia residents living in poverty. The Society of St. Andrew coordinates directly with hundreds of farmers across the Commonwealth and thousands of Virginia volunteers to pick up unmarketable produce from farmers and growers. This fresh produce is then distributed to existing feeding agencies and programs throughout the state. Through these efforts, millions of pounds of highly nutritious fresh fruits and vegetables make it to the tables of hungry Virginians each year.

The Society of St. Andrew has been recognized by the USDA as the premier field gleaning organization in the country. Founded and headquartered in central Virginia, the Society saves and distributes 20-30 million pounds of fresh produce, each year. This nutritious bounty reaches our nation's poor in all 48 contiguous states, including every county in Virginia. Learn more at www.endhunger.org



To continue to support agriculture and protect water quality, the implementation of best management practices (BMPs) such as nutrient management plans, riparian buffers, livestock exclusion, no-till, cover crops, crop rotations, green manures, organic mulch, compost, grazing, and integrated pest management (IPM) strategies must continue to be emphasized in extension education and natural resources conservation programs.

In a 2010 study conducted by the University of Virginia, researchers found that installing additional soil and water conservation practices like cover crops, riparian buffers, and efforts to exclude livestock from stream would generate significant economic impact. Additionally, the study found that for every \$1 of state and federal funding invested towards the implementation of agricultural best management practices (BMPs) would generate an additional \$1.56 in economic activity for Virginia (Rephann, 2010). The state and federal cost-share programs through greater participation and implementation of best management practices could generate more than 11,700 new jobs for the local and state economy.

The waste disposal pathways of food present various opportunities for alternative utilization technologies, job creation, business incubation and expansion, health promotion, improved food access, environmental stewardship and economic success. Even though the typical Virginia household generates 1.28 pounds of food waste per day or approximately 0.6 pounds per person per day, food waste is sometimes overlooked as a valuable food system resource or compartmentalized as a simple matter of disposal in food system advancement discussions (Ignosh et al., 2010).

And yet, post-consumer waste and other food preparation wastes from homes, commercial retail establishments such as grocery stores, restaurants, and institutional food service sources such as school, university and workplace cafeterias levels account for approximately 12.5% of the municipal solid waste stream. Additionally, the post-consumer food waste stream tends to increase as the population increases. This means the amounts land-filled will continue to increase if diversion and alternative utilization programs are not in place.

In a recent study conducted by Virginia Tech, Ignosh et al., (2010) reported close to 325,000 bone dry tons (BDT) of post-consumer food waste and more than 356,000 bone dry tons of retail food waste as residual biomass was annually land-filled in Virginia. Although post-consumer food waste is typically land-filled at a cost of \$20 to \$60 per wet ton, land-filling post-consumer food waste is not its highest and best use.

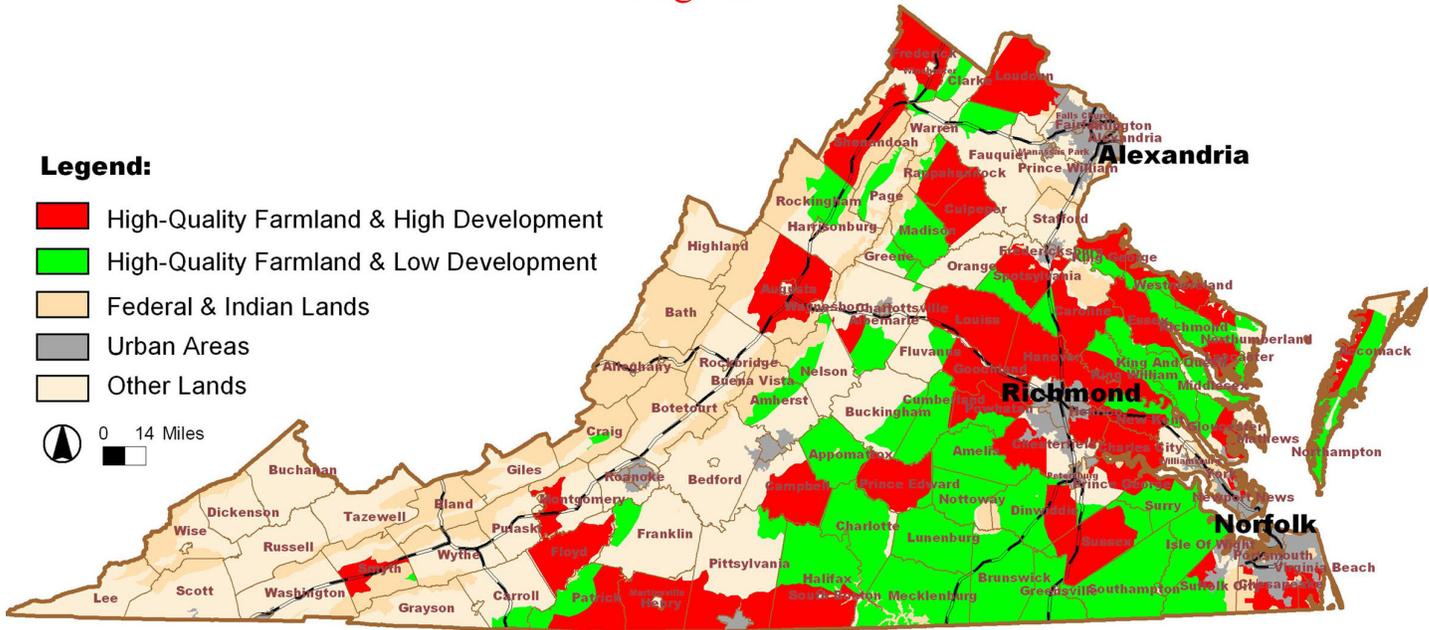
It appears food diversion and recovery programs in Virginia can be expanded to specifically utilize this valuable organic waste material, conserve landfill space, prevent disposal costs of edible and post-consumer food waste for businesses and communities, and enhance reuse of organic waste materials as either a soil amendment or alternative energy feedstock.

FARMING ON THE EDGE

Sprawling Development Threatens America's Best Farmland



Virginia



Geographic Distribution of Bioresidue Generation from Post Consumer Food Waste (Annual Bone Dry Tons)

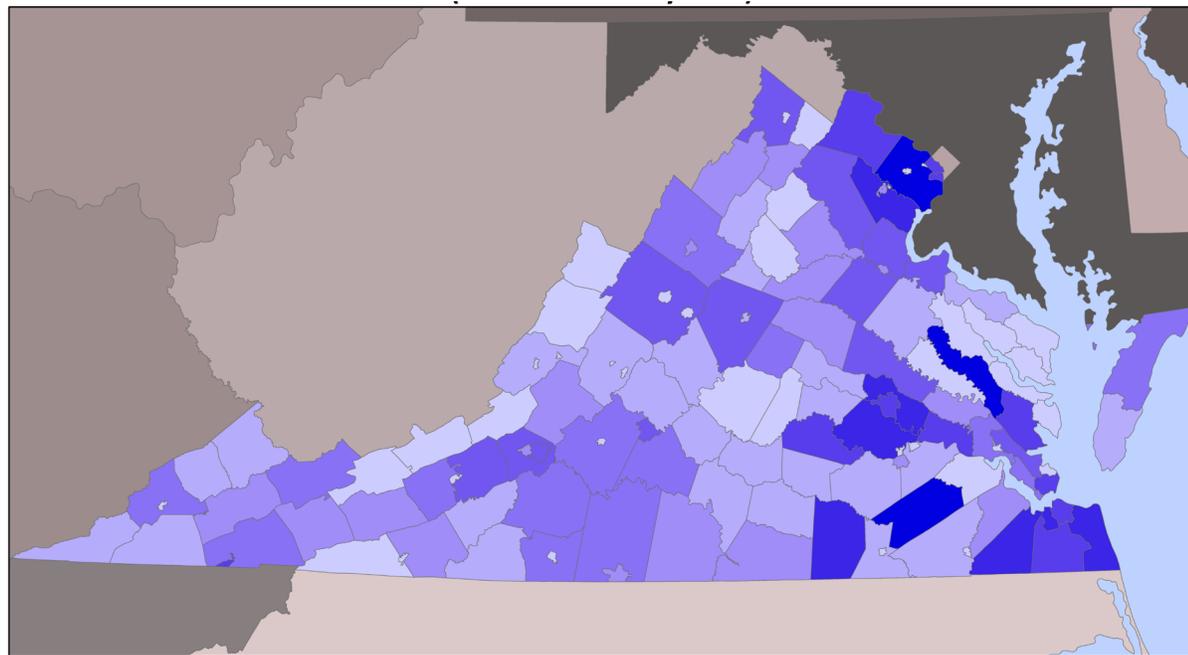


Table 2. Top five Virginia counties for post-consumer food waste.

Top Five Virginia Counties for Post-Consumer Food Waste		
Rank	County	Residual (Bone Dry Tons)
1	Fairfax	41,667
2	Sussex	31,224
3	King and Queen	24,628
4	Henrico	16,106
5	Suffolk	10,544
Statewide Total		323,370

Source: Ignosh et al., (2010) Preliminary Residual Biomass Inventory for the Commonwealth of Virginia.

The Planning, Information Gathering and Vetting Process

At each stage of the development of the Virginia Farm to Table Plan, input was sought from a variety of stakeholders and the general public. The Virginia Farm to Table Plan Team drew on the expertise and experience of more than 1,920 individuals from across the Commonwealth to develop the Virginia Farm to Table Plan recommendations. A variety of methods were utilized to garner information, input and feedback to develop the recommendations. The methods included holding summits, forums, listening sessions, focus groups, and an online survey. The summits, forums, listening sessions, and focus group meetings were held in the following locations across the state: Blacksburg, Charlottesville, Hampton, Harrisonburg, Lexington, Petersburg, Richmond, St. Paul, and Weyers Cave.

At each meeting, participants were encouraged to outline their vision for a healthy, vibrant resilient Virginia food system. The organizers and facilitators did not seek consensus among participants for their vision and the values they outlined. Themes that emerged from conversations and discussions of a healthy, vibrant resilient Virginia food system included the following:

- independence and self-sufficiency
- farm-to-school programs are expanded with more year-round local food menu offerings
- concept of foodsheds and sustainability is commonly understood
- profitable and sustainable farms and food systems
- consumer education and awareness is increased
- farmers and farm workers have access to affordable healthcare and insurance
- policies are relevant to landscapes, communities and farmers
- knowledge of Virginia’s food system is integrated into school curriculum from Kindergarten to University
- increased mobile market and food processing opportunities
- more regional collaboration and coordination with food system development and infrastructural advancements
- whole farm conservation and planning, and
- producers are able to make a viable living and business.

A key component to gathering public input was the development and implementation of an online survey that allowed Virginia residents to prioritize Virginia’s needs for strengthening its local, regional and statewide food systems. An electronic survey was developed by the Virginia Farm to Table Plan work group and piloted with 17 participants attending the Shenandoah Valley Farm to Table Summit in Weyers Cave, Virginia.

With minor improvements, the electronic survey was then distributed to diverse organizations and networks involved in agriculture, food, health, community development, policy making, and planning. Organizations that helped facilitate the distribution of the survey instrument included the Virginia Food System Council, Virginia Farm Bureau, Virginia Cooperative Extension, Virginia Department of Agriculture and Consumer Services, Virginia Rural Center, Virginia Association of Biological Farming, Virginia Natural Resources Leadership Institute, and Virginia Department of Mines, Minerals, and Energy.



Making quality food accessible for all Virginians regardless of socioeconomic level.

The electronic survey was made available to the general public through a link on the Virginia Tech website, and a series of listening sessions and summits that took place across the Commonwealth. The electronic survey was open for three weeks (Hightower and Benson, 2011).

Demographics of Survey Respondents

In total, 1,134 Virginia residents completed the survey from 418 zip codes throughout the Commonwealth (Figure 9.). The majority of survey respondents were female (approximately 60%, n=465). Details of respondent demographics are listed in Appendix B. Survey participants self-identified within all aspects of the food system including the agricultural production sector (33%, n=372), agricultural processing and distribution sectors (3%, n=32), and food service, education, and government sectors (64%, n=730). See Appendix B for the respondents' primary function within the food system. About half of the respondents (44%) identified themselves as farmers, producers, growers, and market-gardeners. Approximately 23% of respondents were from higher education, and 8% of the respondents worked within K-12 institutions (Hightower and Benson, 2011).

Survey participants were asked to rank 34 items from 1 to 4 in terms of their level of importance to strengthening Virginia's food systems, where 1 was not important and 4 was very important (Table 3. see page 36).

The items covered four major categories including

- Business and production management;
- Market development;
- Food system planning, management, and policy; and

- Food security, food safety, diet, & health.

The participants then ranked each item within the survey, and an average score was calculated for each of the items. The item given the highest priority rating by participants was "Understanding by government officials of the economic, environmental, and social issues surrounding the local food system." The second highest rated item by participants was "Development of food outlets with local and regional foods." The third highest ranking item by participants was "Economic impact of local and regional food systems on localities." Participants tended to score items as higher priority areas that focused on educating government officials about Virginia's food system and developing local and regional markets.

The item that was given the lowest priority rating among participants was "Implementing a tracking system for products as they travel through the supply chain." The second lowest rated item by participants was "Research on food safety risks to consumers within a local or regional food system." The third lowest rated item by participants was "Consumer education and training on food budgeting and food assistance programs." Participants tended to score items as lower priorities that related to consumer education and food safety.

The overall priority rankings for each of the four categories for the online survey were then calculated. The category with the highest rated items was "Food System Planning, Management, and Policy." The category with the second highest rated items was "Market Development." The category with the third highest rated items was "Food Security, Food Safety, Diet, & Health." The category with the lowest rated items was "Business and Production Management."



Figure 7. Distribution of survey respondents from 418 distinct zip codes in Virginia.

Table 3. Ranking of Survey Items

Rank	Item	Mean Score	Coefficient of Variation
1	Understanding by government officials of the economic, environmental, and social issues surrounding local food system.	3.63	17.6 %
2	Development of food outlets with local and regional foods.	3.61	18.0 %
3	Economic impact of local and regional food systems on localities.	3.53	18.2 %
4	Training, knowledge, and support to market development for local and regional products.	3.53	18.8 %
5	Land-use planning and zoning considerations for food system needs.	3.53	19.3 %
6	Consumer focused educational programs on healthy eating and cooking with local and regional foods.	3.48	21.3 %
7	Environmental impacts of local and regional systems on localities.	3.47	20.4 %
8	Development of markets for local and regional foods to meet the needs of educational institutions and hospitals.	3.47	20.9 %
9	Education on identifying local marketing opportunities.	3.46	20.9 %
10	Training, knowledge, and support to develop comprehensive business plans.	3.45	21.2 %
11	Availability of USDA- and state-approved processing capabilities (flash-freeze, canning, meat processing, and community kitchen).	3.44	22.1 %
12	Educational programs in whole-farm planning.	3.42	21.7 %
13	Business planning support to maintain public, physical, and capital infrastructure for local food systems.	3.41	20.9 %
14	Training, knowledge, and support for value-added marketing and product pricing.	3.39	21.0 %
15	Local food system planning in the localities' comprehensive plans.	3.39	22.0 %
16	Cost, supply, and knowledgeable workforce to prepare local, fresh, value-added foods.	3.38	21.1 %
17	Consumer focused education on the cost of local and regional foods.	3.35	22.9 %
18	Local or regional food systems impact on the diet and health of consumers.	3.35	23.4 %
19	Cost and availability of insurance for producers direct selling local food products.	3.34	22.1 %
20	Affordable business loans for long-term and short-term financing.	3.34	24.9 %
21	Knowledge of and step-by-step procedures to meet Good Agricultural Practices (GAP) certification.	3.32	23.6 %
22	Educational programs in specialty crop production.	3.31	23.9 %
23	Managing or disposing of the non-consumable (waste) products generated during the food production and consumption process.	3.30	23.5 %
24	Year-round local product availability.	3.27	25.8 %
25	Training, knowledge, and support to obtain loans for local food enterprises.	3.27	25.9 %
26	Food safety practices for local foods (food storage, preparation, preservation) targeted at consumers.	3.23	25.4 %
27	Educational programs in animal/livestock husbandry.	3.22	25.3 %
28	Commercial education about safely producing, preparing, and storing local and regional foods.	3.20	24.8 %
29	Benchmark data to support local food business financing.	3.17	25.0 %
30	Knowledge of land purchase agreements and renting options specific to Virginia.	3.12	26.9 %
31	Access to food system market research for localities.	3.10	25.2 %
32	Consumer education and training on food budgeting and food assistance programs.	3.05	28.7 %
33	Research on food safety risks to consumers within a local or regional food system.	2.97	30.2 %
34	Implementing a tracking system for products as they travel through the supply chain.	2.82	33.9 %

The findings from the online survey were analyzed and integrated with other primary and secondary research data about Virginia's food system to give an overall perspective of issues facing farmers, food system innovators and communities. The 38 distinct farm to table recommendations were developed and distilled from research and information gathered from farm-to-table summits, forums, listening sessions, an online survey, and focus group meetings conducted over a 15-month period by the Virginia Farm to Table Team and the Virginia Food System Council.

The draft recommendations were then shared back with participants who attended the farm-to-table summits, forums, listening sessions, and focus group meetings. The draft recommendations were also shared with the 24 participating organizations of the Virginia Food System Council for further feedback and refining.

From the list of 38 recommendations for strengthening Virginia's food system and economic future, eight recommendations were identified as key priorities for immediate implementation and action. These eight priority recommendations and the draft Virginia Farm to Table Plan were vetted further at the 2nd Virginia Food Security Summit.

The 2nd Virginia Food Security Summit was held on December 5th and 6th, 2011 in Charlottesville, Virginia. With 324 people participating overall, the summit more than doubled participation from that of the 1st Virginia Food Security Summit, which was held 4-1/2 years earlier in May 2007. The Summit was a partnership initiative of the University of Virginia, the UVA Food Collaborative, Virginia Farm Bureau Federation, Virginia Food System Council, Virginia State University School of Architecture, Virginia Tech, Washington & Lee University, and the Piedmont Environmental Council.

A Summit, as distinct from a conference, usually brings people together for discussing specific proposals or developing specific strategies. The first Virginia Food Security Summit, convened in May 2007 by a partnership of the University of Virginia and Virginia Tech, decided that Virginia was ready for and needed a statewide food policy council. Over the next 18 months, a working group facilitated by the UVA Institute for Environmental Negotiation actively explored the various options and methods for forming a statewide council. In March 2009, the Virginia Food System Council held its inaugural meeting and began developing strategic goals for advancing Virginia's food system.



“The local food movement turns people from passive recipients into active food citizens.”

~ Fred Kirschenmann, Distinguished Fellow of the Leopold Center for Sustainable Agriculture at the 2nd Virginia Food Security Summit.

One need identified early by the Council was the development of a statewide plan for Virginia's food system. Now, nearly 18 months after the founding of the Council, a plan was drafted by the Virginia Farm to Table Team and Council based on extensive research and public involvement from all sectors of Virginia's food system.

The goals of the 2nd Virginia Food Security Summit were:

- To introduce the Virginia Farm to Table Plan, the first state-wide strategic food security plan.
- To hear national and state leaders speak on the conditions of food systems in Virginia.
- To develop ideas and action items for implementing the Virginia Farm to Table plan.
- To learn from food system innovators from across the state.

The summit's main purpose was to launch the Virginia Farm-to-Table Plan, the first statewide strategic food security plan. Participants received the draft plan several days in advance for prior review, and at the summit participated in discussions to identify clear “next steps” to begin implementing the plan's eight priority strategies. The hope was for participants to become energized at the summit by the Plan, and, conversely, for the Plan to become energized by the participants' ideas for next steps (University of Virginia, 2012).

Facilitated discussions were held at the 2nd Virginia Food Security Summit to review the Plan's top eight recommendations for immediate action and implementation.

Criteria for selecting the top three action steps for the eight priority recommendations were

- How powerful is the action likely to be to implementing this strategic priority?
- Is the action practical?
- Is the action doable in a timeframe of 1- 2 years?
- If the action affordable (people, effort, and money)?
- Is the action politically feasible?

This Plan's recommendations give a framework and foundation for a healthy food system and sustainable economic future in Virginia. As groups and communities work together on food system issues across the state over time, additional objectives, recommendations, and specific actions steps applicable to the local and state situation will be developed.

Virginia Farm to Table Recommendations for Local and State Action

In looking at the breadth and scope of Virginia's food system, the Virginia Farm to Table Team identified four key topic areas as foundational components for strengthening Virginia's agriculture and food system, advancing public and community health, conserving critical natural resources like prime agricultural soils and local waterways, enhancing local and state economies, and encouraging community viability and quality of life. An underlying assumption and key tenet for the development of the Virginia Farm to Table Plan is that quality food should be affordable and accessible to everyone in Virginia regardless of their economic means. Healthy farms and health food are essential for the common wealth and common good of Virginia.

The recommendations are based on discussions and input gathered and synthesized from summits, forums, listening sessions, focus group meetings and an online survey around four key topic areas. The recommendations below are not listed in order of priority or hierarchical rank, but are recommendations to strengthen Virginia's food system more comprehensively and systematically through more concerted assessment, education, development, and policies.

Business and Production Management

Objective: To cultivate viable production and profit to assist the Commonwealth in meeting the needs of individual's efforts at establishing and maintaining responsible businesses along the

farm to fork value chain. The recommendations provided by the Virginia Farm to Table Plan identify strategic areas for investment and education to promote a vibrant and sustainable future.

Benefits of recommendations: An increase in the number of farmers, farmer workers, and food-based enterprises producing and selling food to ensure a food secure and sustainable Virginia; Increased number of jobs that promotes resilient economic development around farming and food; Preserved farmland through successful land transitions from one generation to the next.

Possible partners: Virginia Farm Bureau Federation, Blue Ridge Permaculture Network, James Madison University, Local Agriculture Economic Development Offices, Local Food Hub, Rural SCALE, University of Virginia, Virginia Cooperative Extension, Virginia Department of Agriculture and Consumer Services, Virginia Foundation for Agricultural Innovation and Rural Sustainability, Virginia State University, Virginia Tech, Crossroads Resource Center, Small Business Development Centers, USDA Natural Resources Conservation Services, and others.

- 1.1 Develop a business planning educational program for farmers and food entrepreneurs to include:
 - a. strategic business planning and long-term goal setting;
 - b. tactical business planning keyed to developing, evaluating, and selecting alternatives that support the businesses' long-term goals;
 - c. developing an information system to measure, monitor, and provide feedback on outcomes and progress towards goals;

Cultivating New and Beginning Farmers:

The Virginia Beginning Farmer and Rancher Coalition Project

Virginia's farming population is aging, while the number of farmers is experiencing a steady decline. According to the 2007 Census, the average age of farmers in Virginia is 58 years old, 32 percent of which are over 65. As the farming population ages, maintaining agricultural production in Virginia is imperative to the state's economy and to the quality of life for its citizens. Virginia is also among the most expensive states for farmland, making it difficult for aspiring farmers to purchase suitable acreage.

The Virginia Beginning Farmer and Rancher Coalition Project aims to improve opportunities for beginning farmers and ranchers to establish and sustain viable agricultural operations in Virginia through the development and enhancement of whole farm planning programs, online resources, and farmer mentoring networks using a community-based participatory research approach. The Virginia Beginning Farmer and

Rancher Coalition Project is a collaborative effort represented by a range of beginning farmer stakeholders across the Commonwealth of Virginia: higher education, Cooperative Extension, non-governmental sector, state and federal government, and individual farmer groups. The Coalition is dedicated to addressing the needs of the spectrum of beginning farmers and ranchers in Virginia. The Coalition recognizes a diversity of farming experiences, backgrounds, and aims held by Virginia beginning farmers and ranchers.

The Virginia Beginning Farmer and Rancher Coalition Project is housed in Virginia Tech's Department of Agricultural and Extension Education and is sponsored through the Beginning Farmer and Rancher Development Program (BFRDP) of the USDA-National Institute of Food and Agriculture (NIFA).

www.vabeginningfarmer.org

- d. understanding the role of credit and financing in new ventures for farmers, entrepreneurs and processors;
- e. providing on-going education, training, and technical assistance with special attention given to holistic business planning; whole farm planning; ecologically-sound farming systems; best management practices (BMPs); permaculture; and farm resource management planning for effective conservation of soil, water and other natural resources.

Assess and identify gaps in current incentives and technical assistance programs supporting Virginia farmers in establishing and implementing whole-farm resource management and comprehensive conservation plans for improved water quality and natural resources conservation.

Work with Virginia Beginning Farmer and Rancher Coalition, coordinated by Virginia Tech and Virginia State University, to recruit, train, and establish the next generation of farmers and farm workers to provide quality food through ecologically sound and profitable production systems.

- 1.4 Establish a shared database to coordinate and support expansion of farm start-up education, beginning farmer training, mentorships, internship opportunities in the public and private sector from middle school and on up.
- 1.5 Provide and support farm transition and farmland protection educational programs and consultation services for all parties with a vested interest in the farm (e.g., family, first or second generation farmers, non-family land transfers, Purchase of Development Rights, and Land Conservation Fund).
- 1.6 Assess the need for teaching farms to provide hands-on training in basic farming techniques and ecologically-based farming systems; acquisition, use and maintenance of land, equipment, and machinery; and day-to-day business management.
- 1.7 Survey and ascertain basic infrastructure needs throughout Virginia (i.e., slaughter facilities, cooling and packing operations, community kitchens, canneries, mills and market point distribution systems).
- 1.8 Provide technical assistance and business incentives to assist with the development of regional aggregation and distribution sites throughout Virginia.
- 1.9 Assess and develop ways to improve access to affordable healthcare insurance for farmers and farm workers.

Market Development

Objective: To promote the expansion of the market for regionally produced agriculture and food products through creating new value added and differentiated products,

James Madison University's Local Agriculture Farm Internship Program

James Madison University's "Local Agriculture and Farm Internship" course emerged through discussions with local, small-scale farmers interested in working with committed, energetic JMU students, as well as the instructors' desire to connect JMU undergraduates with local ecology and sustainable farming practices. This course involves classroom time, as well as hands-on farming. The **learning objectives** for this course include:

- understanding of local ecology and its impacts on farming, as well as how farming impacts local ecology;
- engaging in small-scale farming techniques, such as intercropping, crop rotation, animal husbandry, rotational grazing, how to fertilize crops and control pests, and/or other farming techniques;
- articulating how small-scale farms operate as businesses (how do they remain viable? How and what do they market?);
- examining localization and slow-food movements and recognizing the impacts of globalized or industrial food and fiber production; and
- identifying the strengths and limitations of small-scale farming.

converting new consumers to buy local foods, increasing market access and to increase current consumption from individuals already engaged in the local market.

Benefits of recommendations: Increased regional market capacity; Enhancement of food system infrastructure, including hubs, processors, and packagers; Local food system innovation and expansion through regional scaling up.

Possible partners: Appalachian Sustainable Development, Virginia Farm Bureau Federation, Virginia Foundation for Agricultural Innovation and Rural Sustainability, Local Food Hub, Rural SCALE, Sustain Floyd, Virginia Cooperative Extension, Virginia Department of Agriculture and Consumer Services, Virginia State University, Virginia Tech, USDA Rural Development and others.

- 2.1 Develop a comprehensive market development educational program at the state and local level to include: 1) strategic market development and long-term goal setting; and 2) tactical market planning for farmers, entrepreneurs and processors.
- 2.2 Survey the capacity of Virginia-based meat and other food processing facilities for storage, processing and increased

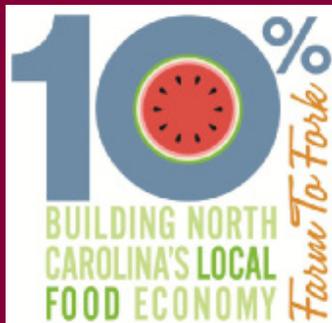
sales and implement these food processing resources where there is an obvious need.

- 2.3 Assess the supply and demand for value-added food processing (i.e., canning, milling, freezing, on-farm milk processing) in Virginia and identify the hindrances and opportunities for operating value-added food processing facilities in the state.
- 2.4 Assess and establish financial incentives for small and mid-sized value-added food processors in Virginia (i.e., fruits, vegetables, meats and grains).
- 2.5 Offer recurring Good Agricultural Practices (GAP), as well as Good Aquacultural Practices, educational workshops and training for extending the season, scaling up, opening new market opportunities, and encouraging overall environmental stewardship and food safety.
- 2.6 Assess the capacity for establishing other food hubs throughout the state to meet institutional demand.
- 2.7 Establish a comprehensive informational website and networking resource for all Virginia local food and food system resources— with information for producers as well as consumers (e.g., Community Food System Explorer).
- 2.8 Examine the potential for a Chesapeake Bay brand for Virginia seafood, aquaculture, and food products that recognizes and incentivizes sound environmental practices and the health of the Bay as a key criterion.

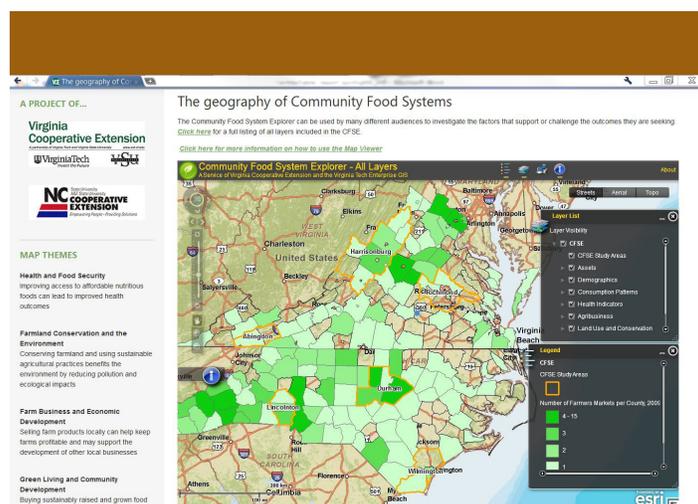
North Carolina's 10% campaign

Launched in 2010, the 10% Campaign, in partnership with North Carolina Cooperative Extension Service and funding from Golden Leaf, has helped grow N.C.'s economy. The campaign challenges N.C. residents to spend 10% of their food dollars locally to support producers, businesses, and communities. Each week, an email was sent to the participating residents with a few questions about where they spent their money on food.

After a year of tracking more than 4,000 N.C. residents, they found that more than \$5.7 million went to purchasing local foods. Even a few restaurants and large businesses in N.C., such as Piggly Wiggly and Whole Foods Market, took the 10% pledge. The campaign is ongoing getting more residents and businesses to participate.



<http://www.nc10percent.com>



Community Food System Explorer

The Community Food System Explorer (CFSE), a multi-faceted web resource that helps food system advocates “see” their food system, and make strategic choices about how to develop it into the future. The CFSE responds to the needs expressed by community members, policy makers, economic development agencies, and planners for baseline data on social and economic characteristics of existing community foods systems.

An interactive mapping system shows the current state of economic, social, and policy networks that support local food in Virginia and North Carolina, in over 196 individual map layers. Maps show the location of farms, farmers markets, and community distribution networks that produce and sell local foods together with key variables such as local farmland conservation policies and consumer characteristics.

In addition, the CFSE provides a how-to manual that can be used to facilitate a community-based food system assessment and planning process. The goal of the process is to define objectives and specific strategies for developing a community's food system, as defined by the community itself. A resources section of the site contains useful links to help food system advocates put their plan into action.

The CFSE is the product of a Southern Sustainable Agriculture Research and Education (SARE) grant entitled, “Sustainable agriculture in Virginia and North Carolina: A multi-state assessment of the economic, social, and political context”.

<http://www.cfse.ext.vt.edu/>

Cultivating Virginia Farm-to-School

The National Farm-to-School Network defines farm-to-school as the act that connects schools (K-12) and local farms with the objectives of serving healthy meals in school cafeterias, improving student nutrition, providing agriculture, health and nutrition education opportunities, and supporting local and regional farmers.

In 2007, recognizing the problems associated with childhood obesity and the search to open additional markets for fresh farm products in Virginia, the General Assembly passed Senate Joint Resolution 347, which requested that the Secretary of Agriculture and Forestry and the Secretary of Education establish a farm-to-school task force to develop a plan for implementing a farm-to-school program in Virginia. Since then, the Virginia Department of Agriculture and Consumer Services (VDACS) and the Virginia Department of Education have worked jointly to partner with numerous organizations including Virginia Cooperative Extension and the Virginia Food System Council to develop and implement Virginia Farm-to-School. Because of its initial successes, in 2010, House Joint Resolution 95 was passed in the Virginia General Assembly, which made the Virginia Farm-to-School Week an official annual event during the second week of November.

According to VDACS, Virginia schools currently spend more than \$6 million annually on fresh produce. From a 2009 study by the Virginia Food System Council, since the General Assembly directed the implementation of the Virginia farm-to-school program in 2007, there has been a 300 percent increase in Virginia foods served in public and private schools. Additionally, the Virginia Food System Council found that Virginia public schools serve 681,505 lunches daily to nourish students and during a 180-day school year more than 122 million lunches are



served. If \$0.25 a day per student lunch could be devoted to purchasing locally-grown Virginia farm products, a total of \$170,376 would be generated daily. On an annual basis, more than \$30.7 million dollars would be reinvested into Virginia communities and economy.

“I believe that the economic impact of increasing local food purchases, even if only by a small percentage, would be dramatic. This is an exciting time to be a part of school feeding.” ~ Andrea Early, Director of School Nutrition for Harrisonburg City Public Schools

In 2010, the United States Department of Agriculture (USDA) farm-to-school team visited the Harrisonburg City Public School System to learn more about their farm-to-school activities. From 290 requests, Harrisonburg City was one of 15 school districts picked for a farm-to-school visit. After these visits were completed, the USDA published its report which is available at its farm-to-school website, <http://www.fns.usda.gov/cnd/f2s>.

To help farmers, school nutrition directors, and other local food system stakeholders connect to Virginia Farm-to-School, there are several local, state and national resources available. These include the:

Virginia Department of Agriculture & Consumer Services, www.vdacs.virginia.gov;

Virginia Department of Education, www.doe.virginia.gov;

Virginia Cooperative Extension, www.ext.vt.edu;

Virginia Farm Bureau Agriculture in the Classroom, www.agintheclass.org;

School Nutrition Association of Virginia, www.sna-va.org;

and National Farm-to-School Network, www.farmtoschool.org.

<http://www.vdacs.virginia.gov/marketing/farm.shtml>



- 2.9 Institute a local ingredient label/sticker on value-added products to incentivize food processors that use Virginia Grown products in their ingredients.

Food System Planning, Management and Policy

Objective: To develop and implement local and regional land-use, economic development, public health, and environmental goals, programs and policies to promote economic sustainability, ecological integrity and social justice within a defined geographic region through civic engagement. Community planners and government officials play an integral role in designing and planning healthy, sustainable local and regional food systems to support and enhance the overall public, social, ecological, and economic health of communities. Community food system planning will plan programs and policies that consider the health, culture and economy comprehensively and holistically for existing and future opportunities.

Benefits of recommendations: Community food system planning as defined by the American Planning Association will preserve existing and support new opportunities for local and regional urban and rural agriculture; promote sustainable agriculture and food production practices; support local and regional food value chains and related infrastructure involved in the processing, packaging, and distribution of food; facilitate community food security, or equitable physical and economic access to safe, nutritious, culturally appropriate, and sustainably grown food at all times across a community, especially among vulnerable populations; support and promote good nutrition and health, and; facilitate the reduction of solid food-related waste and develop a reuse, recovery, recycling, and disposal system for food waste and related packaging (American Planning Association, 2011).

Possible partners: American Planning Association, Crossroads Resource Center, Virginia Farm Bureau Federation, Rural SCALE, Piedmont Environmental Council, Virginia Cooperative Extension, Virginia Department of Agriculture and Consumer Services, Virginia State University, Virginia Tech, USDA and others.

Farm-to-University Opportunities

One of the seven guiding principles of Virginia Tech Dining Services is to promote a sustainable dining and food system at Virginia Tech and, therefore, the greater community. Thus, Virginia Tech Dining Services has expanded its values beyond that of serving safe, quality food. Knowing where the food that is served comes from is being critically considered, as well. Sourcing foods from regional growers is an important effort. During times of constrained budgets, when organic or local food could not fit, Virginia Tech Dining Services has begun to also grow some of its own food on about three acres of organically managed plots. These plots are managed by students, worked by Dining Services employees, and are available to anyone that wants to gain some hands-on experience and learn about gardening. The Virginia Tech Dining Services Garden at Kentland Farm is part of a unique curriculum for the Civic Agriculture and Food Systems Minor, which provide a learning space for credit-driven classes along with non-credit based experiential learning. Virginia Tech Dining Services views this as a start toward improving food systems holistically. In the fiscal year 2010, Virginia Tech dining purchases was 1.6% local, sustainable, and/or organic food.

For more information visit: <http://farmsandfields.wordpress.com> or <http://www.dining.vt.edu/sustainability>

Purchasing budgets of selected Virginia colleges and universities from 2010-2011

College/University	Enrollment	Operated by	Fruits and Vegetables	Dairy	Eggs	Meat & poultry	Seafood	Coffee	Total amount spent on food	Total amount spent on local food*
College of William and Mary	8,200	ARAMARK	\$1,610,000	\$473,800	\$172,500	\$1,023,500	\$299,000	\$437,000	\$4,015,800	\$1,084,300
University of Richmond	4,405	Self-operated	\$713,616	\$124,555	\$76,416	\$917,803	\$147,873	\$124,939	\$2,105,202	\$142,888
University of Virginia	21,049	ARAMARK	_____	_____	_____	_____	_____	_____	_____	\$616,500
Virginia Commonwealth University	32,000	ARAMARK	\$1,690,000	\$585,000	\$195,000	\$1,640,000	\$720,300	\$845,000	\$5,675,300	\$200,000
Virginia Military Institute	1,569	ARAMARK	\$200,000	\$250,000	\$150,000	\$1,000,000	\$50,000	\$50,000	\$1,700,000	\$0
Virginia Tech	31,000	Self-operated	\$1,024,123	\$827,146	\$114,055	\$2,431,987	\$196,626	\$60,844	\$4,654,781	\$176,100
Washington & Lee University	2,153	Self-operated	\$84,059	\$65,379	_____	\$149,438	_____	_____	_____	\$326,896

Source: Sustainable Endowments Institute. 2011. *The College Sustainability Report Card*. Retrieved from <http://www.greenreportcard.org/>

*The Sustainable Endowments Institute defines local food for their report as within a 125-mile radius of the school campus.

- 3.1 Work with the Virginia Food System Council to remove regulations that impede the development and expansion of the production, processing, distribution, and marketing capacity of locally-grown Virginia foods.
- 3.2 Work with state and federal agencies and institutions to increase their support of locally-grown Virginia food and farm products.
- 3.3 Set measurable goals and track procurement purchases and costs of Virginia Grown products for all state agencies, schools, universities and institutions.
- 3.4 Assess the economic and environmental impacts of local and regional food systems on localities.
- 3.5 Provide education, resource, and policy support for the Virginia Farm-to-School program to increase the amount of local food procured in Virginia's public schools.
- 3.6 Evaluate and suggest adjustments for purchasing policies of local and state government entities to encourage or incentivize local food procurement.
- 3.7 Assess the current capacity and participation of localities and permitted waste management facilities in food and organic waste diversion and composting programs.
- 3.8 Assess, develop and adopt incentives and technical assistance for Third Party Verification programs, including but not limited to USDA Certified Organic, to add further value to Virginia foods based on land management and natural resource conservation.
- 3.9 Establish a marketing campaign to challenge Virginia households and businesses to buy \$10 per week of locally-grown food for one year.

Food Security, Food Safety, Diet and Health

Objective: To identify ways to improve the integrity of the regional food system to ensure adequate access and amounts of nutritious, safe food to all individuals and households in the Commonwealth.

Benefits of recommendations: To promote awareness of food insecurity and diet related health issues in Virginia; long term reduction of health care costs through health education; development of Best Management Practices (BMPs) and Good Agricultural Practices (GAPs), which ensure the production of safe fresh meats, produce and value added products.

From a policy and planning perspective, the availability of healthy and unhealthy foods in a community is dependent on the proximity and availability of food outlets to schools and residential areas; prevalence and types of food outlets available in communities and neighborhoods; the presence of and

Farm-to-Hospital

Nationally, a number of hospitals are adjusting their food purchasing goals to include fresh, locally grown foods. This is in response to a high demand for nutrient-rich foods, as well as to the fact that 75% of the nation's \$2 trillion health bill is spent on diet-related illness.

One example of a hospital in Virginia that is focused on these efforts is the University of Virginia Health System through its Nutrition Services Department, which serves 45,000 meals per week. In order to obtain the needed volume of produce to serve this number of meals, items would need to be ordered from a number of farms. To address the issue of procurement and delivery, the hospital works with the Local Food Hub (LFH). The Local Food Hub, established in 2009, is a fast-expanding aggregator of produce from 70 farms within 100 miles, which has passed along \$750,000 of local produce to its customers. In 2011, UVa Health System's Nutrition Services has spent \$83,000 for a steady supply of fresh ripe produce. Also, the Local Food Hub operates farm-stands in the hospital cafeterias, a health-promoting service to hospital staff and guests.

In September, 2011, John Nichols, the Senior Director, accepted an award for Virginia's top institution for purchase of local foods.



participation in food and nutrition programs in a community, and local policy and regulatory framework. Communities and groups should give ample consideration to these factors in addressing food access, diet and health at the local level over time.

Possible partners: The University of Virginia, Society of St. Andrew, Jefferson Area Board for the Aging, Virginia Cooperative Extension, Virginia Federation of Food Banks, Virginia Department of Agriculture and Consumer Services, Virginia Department of Conservation and Recreation Division of Soil and Water Conservation, Virginia State University, Virginia Tech,

Refugee and New Communities

The Refugee and Immigration Service office in Roanoke resettles over 200 immigrants per year in the area. Over 11,000 immigrants currently live in Roanoke, many of whom were farmers in their homeland. This includes 125 Somali Bantu. The Bantu and many other immigrant communities live in low-income housing surrounding downtown Roanoke, where no grocery stores currently exist. According to the USDA Food Environment Atlas, 13% of low-income City of Roanoke residents live more than one mile from a grocery store and over 38% receive SNAP (Supplemental Nutrition Assistance Program) benefits.

In 2011, Virginia Tech's VT EarthWorks, an incubation program for agriculture



businesses, partnered with Virginia Cooperative Extension and the Virginia Tech Coalition for Refugee Resettlement to include the Bantu in the 2011 Growers Academy, an 8-week intensive learning series that offers workshops on crop production, soils, integrated pest management, business planning and marketing. Five Bantu farmers completed the academy and, with support from VT EarthWorks programming, started Juba Farms on an acre plot leased at the Catawba Sustainability Center, a 377-acre farm near the City of Roanoke.



Virginia Department of Health, Virginia Department of Social Services, USDA Food Nutrition Program and others.

- 4.1 Identify programs/curricula in Virginia (or elsewhere) that focus on healthy eating and cooking with local and regional foods, focusing first on hands-on, experiential school programs to empower K-12 youth and then to a broader community with topics including:
 - a. Food choices/origins
 - b. Safe food preparation and preservation
 - c. Home and community gardening
 - d. Food waste awareness
 - e. Composting and alternative reuse options
- 4.2 Assess school, organizational, community and media outlets (e.g., TV and radio) interest in offering educational programs or strategies to their audiences.
- 4.3 Gather and disseminate baseline data on local/community diet and health, food deserts, access and availability (i.e., proximity, transportation, financial/economic, other) to local, regional food systems.
- 4.4 Conduct ongoing assessments of diet and health, food deserts, access and availability (i.e., proximity, transportation, financial/economic, other) to local, regional food systems.
- 4.5 Conduct a cost and ecological analysis comparing local/regional foods to foods purchased and transported from other states, regions, and countries.
 - a. Consider economic costs, direct, indirect and induced effects, and ecological footprints,
 - b. Create educational materials and/or a social marketing campaign to share findings from the analysis and embed materials within educational programs/curricula identified under 4.1.
- 4.6 Expand the following programs statewide to improve food security, prevent land-filling of recoverable food and encourage reuse:
 - a. Electronic Benefit Transfer (EBT) and Supplemental Nutrition Assistance Programs (SNAP) at farmers markets and Community Supported Agriculture (CSAs) operations,
 - b. community gardening;
 - c. urban agriculture;
 - d. food gleaning network;
 - e. hunters and anglers for hunger; and
 - f. food diversion and composting.
- 4.7 Establish a community food system recognition program and a central information hub for hospitals, restaurants, schools, universities and other institutions to award and voluntarily list commitments to procurement of locally-grown Virginia foods.
- 4.8 Establish Virginia as host site for the Food Corps program, similar to Virginia Tech's Sustainable Food Corps, to give young adults work and skill training, while addressing food access and security issues.
- 4.9 Provide education, training and technical assistance to help underserved and disadvantaged individuals and communities living in rural or urban food deserts establish home and community gardens to grow healthful food for themselves, their families and neighborhoods.

The key role of nonprofits in developing and strengthening VA's food system

Appalachian Sustainable Development (ASD) is a nonprofit based in southwest Va. Established in 1995, ASD promotes local, sustainable economies in southwest Va. and northeast TN. In addition to its work in forestry and wood products, ASD has spent the past 16 years developing a local food system in the region. ASD believes in promoting wholesale and direct market opportunities for farmers and in providing Virginia citizens with the opportunity to grow, purchase, eat and enjoy their food in a variety of ways. Key to all of this work is education and market access – educating the public on alternatives and educating farmers on how to get the most out of their farming dollar so that they can continue to farm. ASD's work with direct markets includes managing the Appalachian Farmers Market Association (www.appfma.org) which supports farmers markets in the region, providing pass-through grant money and fostering a spirit of learning and support. ASD also started the Appalachian Farm to Family Cooperative, a group of local meat and egg producers that provide healthy meats to institutions and households.

Appalachian Harvest (AH), a social enterprise created by ASD in 2000, connects farmers with wholesale markets by providing training, marketing, aggregation and distribution services to small and medium sized farmers in Appalachian VA and TN. Products from AH farmers are sold through regional grocery store chains and produce brokers such as Ingles, Food City, Whole Foods, and Produce Source Partners. A byproduct of grading produce for the wholesale market is a large number of "seconds" – produce that does not meet the high aesthetic standards of the wholesale market. In 2004 ASD created the Healthy Families ~ Family Farms (HFFF) program which raises money from the community to buy these seconds and then donates them to area food banks and pantries. In addition to providing food to low income individuals, ASD also provides nutrition education, easy, affordable recipes, and additional access options (such as EBT at area farmers markets). The HFFF program has donated hundreds of thousands of pounds of food and provided additional income to hundreds of small local farmers. ASD looks to expand this program to other regions. For more information, please visit www.asdevelop.org

Shalom Farms was started in 2008 as a collaboration between United Methodist

Urban Ministries of Richmond (UMUMR), Virginia Cooperative Extension, and other local partners to create a more equitable food system across Richmond. The farm is now operated independently by UMUMR, and serves as a learning lab where people of all ages, education, and income levels come to learn about where food comes from, sustainable agriculture, and food security. Produce on the farm (approximately 30,000lbs in 2011) goes directly to partners in food deserts in Richmond where it is prepared in hot meals, used in cooking classes, and used to supplement food pantries. Moreover, the produce is sold at extremely affordable prices through youth-run farm stands.

The Shalom Farms project approaches the challenges facing Virginia's food system from a variety of angles. UMUMR believes healthy urban communities need strong healthy farming communities, and vice-versa. This project works to fill immediate holes in the food system while working on sustainable long term solutions. Under their nonprofit model they are able to donate food, sell at cost or a loss, and invest time and resources into education and relationship building. These are critical components helping to transform communities into places where there will be future economic demand for sustainable and healthy food, as well as citizenry interested in growing and selling produce. For more information about Shalom Farms, please visit www.shalomfarms.org



Implementing the Virginia Farm to Table Plan

Objectives: To shepherd and facilitate the coordination and implementation of the Virginia Farm to Table Plan by drawing on the expertise of universities, agencies, organizations, and the private sector.

Benefit of Recommendation: Implementation of the Virginia Farm to Table Plan would directly address 1) local regional farm and food markets 2) agricultural economic development, 3) community viability, and 4) food access, nutrition and health.

Possible partners: The Council should produce a report within nine months and should draw on the expertise Virginia Tech, Virginia State University, Virginia Cooperative Extension, The University of Virginia, Virginia Departments of Agriculture and Consumer Services, Conservation and Recreation, Environmental Quality, Commerce, Education, Health, Mines, Minerals, and Energy, Social Services, Transportation, Virginia Tourism, USDA, academic institutions, private industry, and nonprofit partners.

5.0 The Virginia Food System Council with its participating organizations will shepherd and support the implementation of the Virginia Farm to Table Plan by working closely with agencies, organizations, and the private sector. The Council will develop and report on within 9 months a) a structural framework that is transparent, inclusive, and clear, and that draws connections across sectors; b) a marketing plan that distinguishes between different constituencies and among different purposes: education, policy, and alliances; and c) a business plan that includes a budget, identifies the variety of funders, and targets specific actions to specific funders.

5.1 Establish a Virginia food system report card to facilitate assessment and collection of baseline data for monitoring hunger, health, environmental performance, and advancements of Virginia's food system.

Assessing Progress

To build health, wealth, connection, and capacity around Virginia's food system and economic future, a report card with indicators of social, economic, and environmental sustainability should be developed to assess and gauge progress on a regular basis.

The anticipated short- and long-term outcomes of this concerted multi-sector farm-to-table effort are to:

- encourage business development and expansion;
- create and maintain new jobs;
- incubate small and mid-sized processing and manufacturing enterprises;
- expand in-state and regional markets for locally-grown Virginia farm and food products;
- provide incentives for new and established farmers to invest in their farm and food production enterprises;
- enhance Virginians access to local food and farm markets
- improve food security in all Virginia households and communities;
- develop the programs and infrastructure needed to deliver more food from Virginia farms to market;
- address any policy or regulatory barriers that hinder local farm and food production;
- improve access to Virginia farm and food data for producers, consumers and agencies;
- encourage new farm start-ups and beginning farmers;
- improved health for Virginians and reduced diet-related health care costs for the state;
- promote a sound environment for long-term economic vitality and community viability;
- educate Virginians about the benefits of buying locally-grown Virginia farm and food products.

Helping people know where their food comes from.



“We should incentivize local business clusters that build connections and cooperation between related businesses, even though they may at times compete with each other.”

~ Ken Meter, President of Crossroads Resource Center at the 2nd Virginia Food Security Summit.

Richmond City: Food Policy Commission and Community Gardening Program

The Richmond Grows Gardens program was created by Ordinance No. 2011-50-46 to support sustainability, improve the quality of life for residents, create a healthy environment and enhance economic development and job creation opportunities. Through the Richmond Grows Gardens program, the City of Richmond seeks to increase the public's understanding of the value of community gardens; the need for community gardens in the city; transform vacant and underutilized city parcels into productive gardens; and to encourage and facilitate local urban agriculture which increases access to fresh, nutritional food for residents—particularly those in underserved communities.

Resident groups can apply to permit specific parcels of publicly owned lands for organic gardening through this program. The program currently has one large garden fully permitted in “The Fan” area of the city, two are awaiting funding for insurance, and two are in the process of being permitted. Sixteen potential sites are shown on an interactive map which is available on the program's website. The first permitted garden in the Fan is enjoying a large volunteer base that may soon outgrow its capacity. As residents begin to enjoy the taste and nutritional benefits of fresh organic produce, the City hopes to see the program blossom and expand.

<http://www.richmondgov.com/CommunityGarden>

The Richmond Food Policy Taskforce was established by Mayor Dwight C. Jones as one of the many components of the Mayor's Healthy Richmond Campaign, “Get Well. Stay Well.” The rates of chronic diseases such as high blood pressure, heart disease, diabetes and obesity are very high among Richmond City residents. Diet is a significant factor in these diseases. However, in many of the City's lower income communities, there is no grocery store and transportation to



the nearest grocery store is often cumbersome and costly. As a result, much of the grocery shopping is done at the local corner convenience store which is stocked with highly processed, high fat, high calorie and often low nutrient foods. More often than not, the cost of these items is higher than the grocery store; however the convenience of not having to make travel arrangements makes them more attractive.

The Taskforce is charged with making recommendations for the promotion of innovative land use, economic development, and health policy to include:

- Removing barriers that limit access to quality, healthy and fresh foods;
- Increasing the use of farm to school and farm to consumer programs;
- Expanding the development of local food-based businesses, including farmers markets;
- Expanding urban agricultural production of locally-grown and organically-grown foods to include school and community gardens;
- Enhancing food security of city residents.

Conclusion

Current market demand has set the stage for an unprecedented potential for expanding the production, processing, and distribution of locally and regionally identified and differentiated foods in Virginia. A myriad of social and economic opportunities exist for farmers, producers, retailers, communities and others within the food system to meet the local and regional demand from the farm to the consumer's table.

Virginia can continue to work on a local, regional and state-wide basis to emphasize and encourage the development of more locally-integrated community-based food systems to enhance the economic, social environmental and nutritional health and resilience of communities and localities across the Commonwealth.

Change is inevitable and must be anticipated. The Virginia Farm-to-Table Plan seeks to build human and natural resilience in a changing world in a number of concrete ways. The food system is integrally-related to human resilience in that we all have to eat; unfortunately, disparities and inequality in the food system limit the access some people and communities have to high-quality nutrient dense foods. Similarly, the food system sectors of consumption, production, transformation, distribution, access, and post-consumption all directly impact natural resources, particularly in relation to land use, environmental impact and use of non-renewable energy resources.

The Virginia Farm to Table Plan focuses on four key areas to provide a framework to engage a broad spectrum of stakeholders across the Virginia food system. Findings from the project helped identify objectives for recommendations, benefits to these recommendations, and potential partnerships that may fall within each key area. For organizations and agencies already engaged in these key areas, the recommendations indicate the urgency of the issues and the need to build greater capacity to more broadly and completely address the issue.

In collaborating to implement this Plan as a comprehensive and strategic approach to Virginia's food system from farm to table will have a substantial impact on job creation and retention, farm income, and community well-being. This Plan's recommendations give a framework and foundation for a healthy food system and sustainable economic future in Virginia. As groups and communities work together on food system issues across the state over time, additional objectives and recommendations will be developed. Leadership, communication, collaboration, and dedication will be required

to achieve the goals and recommendations of the Virginia Farm to Table Plan to strengthen and better link food, farming, health, and the economy for the common wealth and common good of Virginians.



Peppers and cabbage actually do come from a farm.

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Virginia Farm to Table Recommendations at a Glance

In looking at the breadth and scope of Virginia’s food system, the Virginia Farm to Table Team identified four key topic areas as foundational components for strengthening Virginia’s agriculture and food system, advancing public and community health, conserving critical natural resources, enhancing local and state economies, and encouraging community viability and quality of life. The recommendations are based on discussions and input gathered and synthesized from summits, forums, listening sessions, focus group meetings and an online survey around these four topic areas in the chart below. The recommendations below are not listed in order of priority or hierarchical rank, but are recommendations to strengthen Virginia’s food system more comprehensively and systematically through more concerted assessment, education, development, and policies.

Topic and Objective	Recommendation	Assessment (A)	Education (E)	Development (D)	Policy (P)
<p>1. Business and Production Management</p> <p>Objective: To cultivate viable production and profit to assist the Commonwealth in meeting the needs of individual’s efforts at establishing and maintaining responsible businesses along the farm to fork value chain.</p>	<p>1.1 Develop a business planning educational program for farmers and food entrepreneurs to include:</p> <ul style="list-style-type: none"> a. strategic business planning and long-term goal setting; b. tactical business planning keyed to developing, evaluating, and selecting alternatives that support the businesses’ long-term goals; c. developing an information system to measure, monitor, and provide feedback d. understanding the role of credit and financing in new ventures for farmers, entrepreneurs and processors e. provide on-going education, training, and technical assistance with special attention given to holistic business planning; whole farm planning; ecologically-sound farming systems; best management practices (BMPs); permaculture; and farm resource management planning for effective conservation of soil, water and other natural resources. 		E	D	
	<p>1.2 Assess and identify gaps in current incentives and technical assistance programs supporting Virginia farmers in establishing and implementing whole-farm resource management and comprehensive conservation plans for improved water quality and natural resources conservation.</p>	A	E	D	P
	<p>1.3 Work with and expand the Virginia Beginning Farmer and Rancher Coalition, coordinated by Virginia Tech and Virginia State University, to recruit, train, and establish the next generation of farmers and farm workers to provide quality food through ecologically sound and profitable production systems.</p>		E	D	P

Topic and Objective	Recommendation	Assessment (A)	Education (E)	Development (D)	Policy (P)	
1. Business and Production Management (cont.) Objective: To cultivate viable production and profit to assist the Commonwealth in meeting the needs of individual's efforts at establishing and maintaining responsible businesses along the farm to fork value chain.	1.4	Establish a shared database to coordinate and support expansion of farm start-up education, beginning farmer training, mentorships, internship opportunities in the public and private sector from middle school and on up.		E	D	
	1.5	Provide and support farm transition and farmland protection educational programs and consultation services for all parties with a vested interest in the farm (e.g., family, first or second generation farmers, non-family land transfers, Purchase of Development Rights, and Land Conservation Fund).		E	D	
	1.6	Assess the need for teaching farms to provide hands-on training in basic farming techniques and ecologically-based farming systems; acquisition, use, and maintenance of land, equipment, and machinery; and day-to-day business management.	A	E	D	
	1.7	Survey and ascertain basic infrastructure needs throughout Virginia (i.e. slaughter facilities, cooling and packing operations, community kitchens, canneries, mills and market point distribution systems)	A		D	P
	1.8	Provide technical assistance and business incentives to assist with the development of regional aggregation and distribution sites throughout Virginia.			D	
	1.9	Gather and disseminate ways to improve access to affordable healthcare insurance for farmers and farm workers.	A		D	P
2. Market Development Objective: To expand the local, regional, and institutional market for Virginia produced agriculture and food products through creating new value added and differentiated place-based products.	2.1	Develop a comprehensive market development educational program at the state and local level to include: 1) strategic market development and long-term goal setting; and 2) tactical market planning for farmers, entrepreneurs and processors.			D	
	2.2	Survey the capacity of Virginia-based meat and other food processing facilities for storage, processing and increased sales and implement these food processing resources where there is an obvious need.	A		D	P
	2.3	Assess the supply and demand for value-added food processing (i.e., canning, milling, freezing, on-farm milk processing) in Virginia and identify the hindrances and opportunities for operating value-added food processing facilities in the state.	A		D	

Topic and Objective	Recommendation	Assessment (A)	Education (E)	Development (D)	Policy (P)	
2. Market Development (cont.) Objective: To expand the local, regional, and institutional market for Virginia produced agriculture and food products through creating new value added and differentiated place-based products.	2.4	Assess and establish financial incentives for small and mid-sized value-added food processors in Virginia (i.e., fruits, vegetables, meats and grains).	A		D	
	2.5	Offer recurring Good Agricultural Practices (GAP), as well as Good Aquacultural Practices, educational workshops and training for organic, extending the season, scaling up, opening new market opportunities, and encouraging overall environmental stewardship and food safety.		E		
	2.6	Assess the capacity for establishing other food hubs throughout the state to meet institutional demand.	A			
	2.7	Establish a comprehensive informational website and networking resource for all Virginia local food and food system resources— with information for producers as well as consumers (e.g., Community Food System Explorer).			D	
	2.8	Examine the potential for a Chesapeake Bay brand for Virginia seafood, aquaculture, and food products that recognizes and incentivizes sound environmental practices and the health of the Bay as a key criterion.	A		D	
	2.9	Institute a local ingredient label/sticker on value-added products to incentivize food processors that use Virginia Grown products in their ingredients.			D	
3. Food System Planning, Management and Policy Objective: To design and plan healthy, sustainable local and regional food systems to support and enhance the overall public, social, ecological, and economic health of communities.	3.1	Work with the Virginia Food System Council to remove regulations that impede the development and expansion of the production, processing, distribution, and marketing capacity of locally-grown Virginia foods.			D	P
	3.2	Evaluate how state and federal agencies and institutions support locally-grown Virginia food and farm products.	A		D	P
	3.3	Set measurable goals and track procurement purchases and costs of Virginia Grown products for all state agencies, schools, universities and institutions.			D	P
	3.4	Assess the economic and environmental impacts of local and regional food systems on localities.	A			P
	3.5	Provide education, resource, and policy support for the Virginia Farm-to-School program to increase the amount of local food procured in Virginia’s public schools.		E		P

Topic and Objective	Recommendation	Assessment (A)	Education (E)	Development (D)	Policy (P)	
3. Food System Planning, Management and Policy (cont.) Objective: To design and plan healthy, sustainable local and regional food systems to support and enhance the overall public, social, ecological, and economic health of communities.	3.6	Gather and suggest adjustments for purchasing policies of local and state government entities to encourage or incentivize local food procurement.	A			P
	3.7	Assess the current capacity and participation of localities and permitted waste management facilities in food waste diversion and composting programs.	A		D	
	3.8	Assess, develop and adopt incentives and technical assistance for Third Party Verification programs, including but not limited to USDA Certified Organic, to add further value to Virginia foods based on land management and natural resource conservation.	A		D	
	3.9	Establish a marketing campaign to challenge Virginia households and businesses to buy \$10 per week of locally-grown food for one year.	A		D	P
4. Food Security, Food Safety, Diet and Health Objective: To identify ways to improve the integrity of the Virginia's food system to ensure adequate access and amounts of fresh, nutritious, safe food to all individuals and households in the Commonwealth.	4.1	Identify programs/curricula in Virginia (or elsewhere) that focus on healthy eating and cooking with local and regional foods, focusing first on hands-on, experiential school programs to empower K-12 youth and then to a broader community with topics including: a. Food choices/origins b. Safe food preparation and preservation c. Home and community gardening d. Food waste awareness e. Composting and alternative reuse options.	A	E		
	4.2	Gather and disseminate school, organizational, community and media outlets (e.g., TV and radio) interest in offering educational programs or strategies to their audiences	A	E		
	4.3	Gather and disseminate baseline data on local/community diet and health, food deserts, access and availability (i.e., proximity, transportation, financial/economic, other) to local, regional food systems	A		D	
	4.4	Conduct ongoing assessments of diet and health, food deserts, access and availability (i.e., proximity, transportation, financial/economic, other) to local, regional food systems	A			

Topic and Objective	Recommendation	Assessment (A)	Education (E)	Development (D)	Policy (P)
<p>4. Food Security, Food Safety, Diet and Health (cont.)</p> <p>Objective: To identify ways to improve the integrity of the Virginia’s food system to ensure adequate access and amounts of fresh, nutritious, safe food to all individuals and households in the Commonwealth.</p>	<p>4.5 Conduct a cost and ecological analysis comparing local/regional foods to foods purchased and transported from other states, regions, and countries</p> <p>a. Consider economic costs, direct, indirect and induced effects, and ecological footprints,</p> <p>b. Create educational materials and/or a social marketing campaign to share findings from the analysis and embed materials within educational programs/curricula identified under 4.1.</p>	A	E		
	<p>4.6 Expand the following programs statewide to improve food security, prevent land-filling of recoverable food and encourage reuse:</p> <p>a. Electronic Benefit Transfer (EBT) and Supplemental Nutrition Assistance Programs (SNAP) at farmers markets and Community Supported Agriculture (CSAs) operations,</p> <p>b. community gardening,</p> <p>c. urban agriculture,</p> <p>d. food gleaning network,</p> <p>e. hunters and anglers for hunger, and</p> <p>f. food diversion and composting.</p>		E	D	
	<p>4.7 Establish a community food system recognition program and a central information hub for hospitals, restaurants, schools, universities and other institutions to award and voluntarily list commitments to procurement of locally-grown Virginia foods.</p>		E	D	
	<p>4.8 Establish Virginia as host site for the Food Corps program, similar to Virginia Tech’s Sustainable Food Corps, to give young adults work and skill training, while addressing food access and security issues.</p>		E	D	
	<p>4.9 Provide education, training and technical assistance to help disadvantaged individuals and communities in rural or urban food deserts establish home and community gardens to grow healthful food for themselves, their families, and neighborhoods.</p>		E	D	

Topic and Objective	Recommendation	Assessment (A)	Education (E)	Development (D)	Policy (P)
5. Implementing the Virginia Farm to Table Plan	5.0 The Virginia Food System Council with its participating organizations will shepherd and support the implementation of the Virginia Farm to Table Plan by working closely with agencies, organizations, and the private sector. The Council will develop and report on within 9 months a) a structural framework that is transparent, inclusive, and clear, and that draws connections across sectors; b) a marketing plan that distinguishes between different constituencies and among different purposes: education, policy, and alliances; and c) a business plan that includes a budget, identifies the variety of funders, and targets specific actions to specific funders. The Council will draw on the expertise of Virginia Departments of Agriculture and Consumer Services, Conservation and Recreation, Environmental Quality, Commerce, Education, Health, Mines, Minerals, and Energy, Social Services, Transportation, Virginia Tourism, academic institutions, private industry, and nonprofit partners.	A	E	D	P
	5.1 Establish a Virginia food system report card to facilitate assessment and collection of baseline data for monitoring hunger, health, environmental performance, and advancements of Virginia's food system.	A	E	D	P



Exploring value-added enterprises like on-farm milk processing.

Appendix A.

Top 20 Commodities in Virginia by Annual Sales

RANK	COMMODITY	CASH RECEIPTS (\$)
1	Broilers	550,228,000
2	Cattle and Calves	287,517,000
3	Milk	264,384,000
4	Nursery/Greenhouse/Sod/Turfgrass	261,400,000
5	Turkeys	215,424,000
6	Soybeans	184,048,000
7	Corn, grain	118,097,000
8	Equine	102,000,000
9	Tobacco (unprocessed leaf)	80,962,000
10	Wheat (Winter)	69,647,000
11	Eggs	68,723,000
12	Tomatoes (Fresh Market)	63,216,000
13	Hay	54,706,000
14	Aquaculture	53,631,000
15	Hogs	49,701,000
16	Cotton (Lint and Seed)	34,354,000
17	Apples	29,597,000
18	Potatoes (Summer)	23,632,000
19	Grapes	12,768,000
20	Peanuts	11,322,000

Source of Data: Virginia Department of Agriculture, 2011. VAgriculture 2010-2011 Facts and Figures. Retrieved at www.vdacs.virginia.gov.

Appendix B.

A SURVEY OF VIRGINIA'S FOOD SYSTEM FROM FARM-TO-TABLE

INTRODUCTION

THIS SURVEY WILL TAKE ABOUT 10 MINUTES TO COMPLETE.

Virginia Cooperative Extension, the Virginia Food System Council, and its participating organizations are conducting this SURVEY OF VIRGINIA RESIDENTS AND ORGANIZATIONS to gather public input on important issues facing Virginia's local and regional food system. This project is being supported by Virginia Tech and Virginia State University.

The results of the survey will be incorporated into a comprehensive Virginia Farm-to-Table plan that will inform and integrate research development, extension education, policy, and funding recommendations to strengthen and enhance Virginia's local and regional food business sectors.

Your participation in this survey is entirely voluntary. You may choose not to participate, you may find certain questions not applicable, or you may discontinue your participation at any time. There are no right or wrong answers. Completion of this survey will constitute informed consent.

PLEASE TAKE THIS SURVEY ONLY ONCE.

SURVEY INSTRUCTIONS: If you exit the survey site, you will be unable to re-enter the survey to change your answers. Use the PREV and NEXT buttons on the bottom of the survey window to navigate back and forth through the survey. Do not exit survey prior to completion. Do not use your browser's BACK ARROW button which results in lock out.

For questions or concerns related to this survey instrument, please contact lead project investigator at:

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THANK YOU FOR ADVANCING LOCAL FOOD SYSTEM DEVELOPMENT IN VIRGINIA.

RESIDENCY

Are you a resident of Virginia? (You are a resident of Virginia if you listed Virginia as your place of residence on last year's income tax return.)

- YES (please continue) Zip Code of Residency _____
- NO (Thank you for your time. No additional information is needed.)

If you are not a resident of Virginia, we sincerely appreciate your attempt to contribute. However, we are only soliciting input from residents of Virginia. We, therefore, urge you contact legislators in your home state to weigh in on these and other important local food and farm issues.

REGISTER

We are asking respondents of this web-based survey to provide an e-mail address in order to prevent spam and only to verify the responses we receive are legitimate. We will NOT use or distribute your e-mail for any other purpose. Your response is confidential and private. Thank you for your participation and understanding.

Please provide your e-mail address. _____

PRIMARY FUNCTION IN VIRGINIA'S FOOD SYSTEM VALUE CHAIN

Select the category that best describes your primary function in Virginia's food system value chain.

(Choose only ONE)

- Pre-harvest: farmer, market-gardener, producer, grower
- Post-harvest: processor, aggregator, distributor, farmers market manager/administrator
- Service and consumption: Retail, institution, lender, supplier, food service, health community educator, advocate, technical assistance provider, education and extension

In one sentence, please describe what you do?

BUSINESS AND PRODUCTION MANAGEMENT

Using a scale of 1 to 4, where 1 is not important and 4 is important, rank each statement about what is needed to support business and production management. Circle the appropriate number or NA (not applicable) if you do not have knowledge of this area.

	Not ImportantImportant				Not applicable
Training, knowledge, and support to develop comprehensive business plans.	1	2	3	4	NA
Benchmark data to support local food business financing.	1	2	3	4	NA
Training, knowledge, and support to obtain loans for local food enterprises.	1	2	3	4	NA
Affordable business loans for long-term and short-term financing.	1	2	3	4	NA
Educational programs in animal/livestock husbandry.	1	2	3	4	NA
Knowledge of land purchase agreements and renting options specific to Virginia.	1	2	3	4	NA
Knowledge of and step-by-step procedures to meet Good Agricultural Practices (GAP) certification.	1	2	3	4	NA
Educational programs in whole-farm planning.	1	2	3	4	NA
Educational programs in specialty crop production.	1	2	3	4	NA

Are there other BUSINESS AND PRODUCTION MANAGEMENT priorities, challenges, or opportunities for Virginia's local and regional food business sector?

- Yes (if yes please describe the other priorities, challenges, or opportunities)
- No

What suggestions do you have to strengthen BUSINESS AND PRODUCTION MANAGEMENT in Virginia?

MARKET DEVELOPMENT

Using a scale of 1 to 4, where 1 is not important and 4 is important, rank each statement about what is needed to support market development. Circle the appropriate number or NA (not applicable) if you do not have knowledge of this area.

	Not ImportantImportant				Not applicable
	1	2	3	4	
Availability of USDA- and state-approved processing capabilities (flash-freeze, canning, meat processing, and community kitchen).	1	2	3	4	NA
Development of food outlets with local and regional foods.	1	2	3	4	NA
Implementing a tracking system for products as they travel through the supply chain.	1	2	3	4	NA
Year-round local product availability.	1	2	3	4	NA
Cost, supply, and knowledgeable workforce to prepare local, fresh, value-added foods.	1	2	3	4	NA
Development of markets for local and regional foods to meet the needs of educational institutions and hospitals.	1	2	3	4	NA
Cost and availability of Insurance for producers direct selling local food products.	1	2	3	4	NA
Training, knowledge, and support to market development for local and regional food products.	1	2	3	4	NA
Training, knowledge, and support for value-added marketing and product pricing.	1	2	3	4	NA
Education on identifying local marketing opportunities.	1	2	3	4	NA

Are there other MARKET DEVELOPMENT priorities, challenges, or opportunities for Virginia’s local and regional food business sector?

- Yes (if yes please describe the other priorities, challenges, or opportunities)
- No

What suggestions do you have to strengthen MARKET DEVELOPMENT in Virginia?

FOOD SYSTEM PLANNING, MANAGEMENT, AND POLICY

Using a scale of 1 to 4, where 1 is not important and 4 is important, rank each statement about what is needed to support food system planning, management, and policy. Circle the appropriate number or NA (not applicable) if you do not have knowledge of this area.

	Not Important Important				Not applicable
	1	2	3	4	
Access to food system market research for localities.	1	2	3	4	NA
Understanding by government officials of the policy, economic, environmental, and social issues surrounding local food systems.	1	2	3	4	NA
Local food system planning in the localities' comprehensive plans.	1	2	3	4	NA
Land-use planning and zoning considerations for food system needs.	1	2	3	4	NA
Business planning support to maintain public, physical, and capital infrastructure for local food systems.	1	2	3	4	NA
Economic impacts of local and regional food systems on localities.	1	2	3	4	NA
Environmental impacts of local and regional food systems on localities.	1	2	3	4	NA
Managing or disposing of the non-consumable (waste) products generated during the food production and consumption process.	1	2	3	4	NA

Are there other FOOD SYSTEM PLANNING, MANAGEMENT, AND POLICY priorities, challenges, or opportunities for Virginia's local and regional food business sector?

- Yes (if yes please describe the other priorities, challenges, or opportunities)
- No

What suggestions do you have to strengthen FOOD SYSTEM PLANNING, MANAGEMENT, AND POLICY in Virginia?

FOOD SECURITY, FOOD SAFETY, DIET AND HEALTH

Using a scale of 1 to 4, where 1 is not important and 4 is important, rank each statement about what is needed to support community food security, food safety, diet, and health. Circle the appropriate number or NA (not applicable) if you do not have knowledge of this area.

	Not ImportantImportant				Not applicable
	1	2	3	4	
Consumer education and training on food budgeting and food assistance programs.	1	2	3	4	NA
Commercial education about safely producing, preparing and storing local and regional foods.	1	2	3	4	NA
Consumer focused education on the cost of local and regional foods.	1	2	3	4	NA
Consumer focused educational programs on healthy eating and cooking with local and regional foods.	1	2	3	4	NA
Food safety practices for local foods (food storage, preparation, preservation) targeted at consumers.	1	2	3	4	NA
Research on food safety risks to consumers within a local or regional food system.	1	2	3	4	NA
Local or regional food systems impact on the diet and health of consumers.	1	2	3	4	NA

Are there other FOOD SECURITY, FOOD SAFETY, DIET AND HEALTH priorities, challenges, or opportunities for Virginia’s local and regional food business sector?

- Yes (if yes please describe the other priorities, challenges, or opportunities)
- No

What suggestions do you have to strengthen FOOD SECURITY, FOOD SAFETY, DIET, AND HEALTH in Virginia?

DEMOGRAPHIC INFORMATION

Select the category that best characterizes your relation to Virginia's food system. (Choose only ONE.)

- Producer, market-gardener, grower
- Food distribution, shipping
- Food processing, packaging
- Food service
- State government
- Local government
- Education (pre-K – 12)
- Higher education (college, university, cooperative extension)
- Service provider
- Other (please specify)

What is your gender?

- Male
- Female

Please indicate your age _____ (this question is optional).

Choose the racial category that best describes you (this question is optional). (Choose all that apply.)

- African American or Black
- American Indian or Alaska Native
- Asian
- Native Hawaiian or Pacific Islander
- Hispanic/Latino
- non-Hispanic/Latino
- White
- Other (please specify)

Please enter your zip code. _____

Do you have any other suggestions for us as we develop the Virginia Farm-to-Table plan?

PARTICIPANT INFORMATION (OPTIONAL)

Would you like to be placed on an e-mail list for information on events from Virginia Food System Council and Virginia Cooperative Extension?

- Yes
- No

If yes, please provide your e-mail address. _____

THANK YOU

Thank you for your time and interest! The Virginia Farm-to-Table plan will be available to the public in the Fall of 2011.

For questions or concerns related to this survey instrument please contact lead project investigators at:

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Virginia Cooperative Extension
2322 Blue Stone Hills Drive, Suite 140
Harrisonburg, Virginia 22801
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E-mail: ebendfel@vt.edu

THANK YOU AGAIN FOR ADVANCING LOCAL FOOD SYSTEM DEVELOPMENT IN VIRGINIA.

Survey Demographics and Additional Results

Gender (n=774)	Percentage of respondents	Number of respondents
Male	39.9%	309
Female	60.1%	465

Age (n=778)	Percentage of respondents	Number of respondents
18 to 24 years old	4.1%	32
25 to 34 years old	14.4%	112
35 to 44 years old	18.5%	144
45 to 54 years old	28.4%	221
55 and older	34.6%	269

Race (n=741)	Percentage of respondents	Number of respondents
African American or Black	3.1%	23
American Indian or Alaska Native	1.9%	14
Asian	0.7%	5
Native Hawaiian or Pacific Islander	0.4%	3
Hispanic/Latino	1.2%	9
Non-Hispanic/Latino	0.3%	2
White	92.4%	685

	Percentage of respondents	Number of respondents
Pre-harvest: farmer, producer, grower, market-gardener	32.8%	372
Post-harvest: processor, aggregator, distributor, wholesaler	2.8%	32
Service and consumption: Retail, institutional, lender, supplier, food service, advocate, technical assistance provider, educator, extension representative	64.4%	730

	Percentage of respondents	Number of respondents
Farmer, producer, grower, market-gardener	43.8%	273
Food processing, packaging, distribution, shipping	4.2%	26
Food service	6.6%	41
State government	5.9%	37
Local government	7.7%	48
Education (pre K – 12)	8.4%	52
Higher education (college, university, cooperative extension)	23.4%	146

Appendix C.

Participating Organizations of the Virginia Food System Council

Appalachian Sustainable Development: This non-profit strives to develop economically viable, sound, and socially just opportunities for Appalachian Virginia and Tennessee farmers, forest land owners, food and forest product producers, and communities.

Catawba Sustainability Center: Located on 377 acres in the Catawba Valley, this center is an experiential showcase for university education and engagement with the local community - a place to practice, demonstrate, learn, and teach about sustainability issues that affect our world today and into the future. In 1988, the land was given to Virginia Tech.

Center for Rural Virginia: The Rural Center's goal is to generate solutions that empower local governments and the private sector to work together. The Center's mission is to assemble good information, facilitate debate and build a consensus at the local level to create coordinated policy and economic action.

Federation of Virginia Food Banks: This is a nonprofit state association of food banks and is the largest hunger-relief network in the state. Composed of the seven regional Virginia/Washington DC food banks, the Federation supports the food banks in providing food, funding, education, advocacy and awareness services and programs throughout the Commonwealth.

Harrisonburg City Public Schools: Located in the Shenandoah Valley, the school system serves about 4,400 students in kindergarten through 12th grade. Local food from the area is appearing more often in the school system through ways such as the Farm to School program. This program lasts during a week in November and brings nutritious fresh foods from local farms to local schools.

HomeGrown Virginia: HomeGrown Virginia is a food distribution company that represents local value-added products for sale to retailers and institutions. These products include foods processed in the Prince Edward Regional Food Enterprise Center.

International Food Policy Research Institute: IFPRI is one of 15 centers supported by the Consultative Group on International Agricultural Research (CGIAR), an alliance of 64 governments, private foundations, and international and regional organizations. Its mission is to provide policy solutions that reduce poverty and end hunger and malnutrition.

Jefferson Area Board for Aging: JABA serves the city of Charlottesville, and the counties of Albemarle, Fluvanna, Greene, Louisa and Nelson by promoting, establishing and preserving sustainable communities for healthy aging that benefit individuals and families of all ages.

Local Food Hub: The Local Food Hub operates a warehouse where they purchase and aggregate locally grown produce from more than 50 small family farms within 100 miles of Charlottesville. The food is then distributed to more than 100 locations in the region, including public schools, hospitals, institutions, restaurants and markets.

Local Food Project at Airlie: Established in 1998, by the Airlie Foundation in association with the Humane Society of the United States, the Local Food Project has provided organically grown vegetables, fruits, herbs, and flowers to the Airlie Center. The center is a leading conference destination in the US. The Local Food Project reaches out to conference guests with tours, visits to the garden, and workshops.

Lulus Local Food: The vision of Lulus Local Food is to design and construct community food systems throughout the country by providing an innovative tool that promotes the marketing, distribution & purchasing of product directly from local farmers.

Mattawoman Creek Farms: Located on the Eastern Shore of Virginia, Mattawoman Creek Farms is a family owned and operated USDA certified organic farm dedicated to growing a wide variety of fresh produce. The farm offers a CSA program for its subscribers from late May through September.

Piedmont Environmental Council: PEC works on safeguarding the landscapes, communities and heritage of the Piedmont by involving citizens in public policy and land conservation. The Piedmont Environmental Council launched Virginia's first Buy Fresh Buy Local campaign in 2006 with the goal of supporting local farmers, productive agricultural lands and rural economies by helping consumers easily find and purchase locally produced foods.

Scale, Inc.: The central purpose of Scale (Sequestering Carbon, Accelerating Local Economies) is to catalyze and accelerate economies, which increase community wealth and restore or sustain the ecosystem. The services are designed for community leaders, farmers, small businesses and non-profit practitioners working towards sustainable economic development. Scale offers assistance in three areas: Consulting with groups and networks; workshops and public speaking; and writing and analysis.

Society of St. Andrew: The Society of St. Andrew focuses on nationwide hunger by distributing fresh food to the hungry through its programs that use volunteers to glean farmers' fields for produce left behind after harvest and gather unmarketable produce donated by members of the agricultural community. The produce is donated and delivered to food banks, pantries, soup kitchens, shelters and other service agencies nationwide.

University of Virginia Food Collaborative: At the University of Virginia, the Food Collaborative works to promote research, teaching, and community engagement in pursuit of more sustainable and place-based food systems. The Collaborative includes faculty, staff and students and is constituted both through its multidisciplinary membership and its engagement with community members and practitioners.

University of Virginia Institute for Environmental Negotiation (IEN): IEN was formed in 1980 by faculty from UVA's School of Architecture's Department of Urban and Environmental Planning to provide mediation and consensus building services concerning the natural and built environments. It is committed to building a sustainable future for Virginia's communities and beyond by building capacity, building solutions, and building knowledge.

Virginia Association for Biological Farming: VABF provides Virginia's agricultural community with information on ecologically sound agricultural practices, techniques and systems, and to support and encourage the development of healthy, sustainable farms and communities in Virginia.

Virginia Beach Department of Agriculture: This department provides leadership, coordination and education to enhance the economic vitality of the City's agriculture industry and the preservation and enhancement of its physical environment, to assist citizens in strengthening their families and to provide citizens and visitors with cultural and recreational opportunities by preserving its agricultural and rural heritage.

Virginia Cooperative Extension: This is an educational outreach program of Virginia's land-grant universities: Virginia Tech and Virginia State University, and a part of the National Institute for Food and Agriculture, an agency of the United States Department of Agriculture. Virginia Cooperative Extension is a product of cooperation among local, state, and federal governments in partnership with citizens, who, through local Extension Leadership Councils, help design, implement, and evaluate programs that stimulate positive personal and societal change, leading to more productive lives, families, farms, and forests as well as a better environment.

Virginia Department of Agriculture and Consumer Services (VDACS): VDACS promotes the economic growth and development of Virginia agriculture, provides consumer protection and encourages environmental stewardship.

Virginia Department of Conservation and Recreation: The Department of Conservation and Recreation works with Virginians to conserve, protect, and enhance their lands and improve the quality of the Chesapeake Bay and our rivers and streams, promotes the stewardship and enjoyment of natural, cultural and outdoor recreational resources, and ensures the safety of Virginia's dams.

Virginia Department of Education (VDOE): VDOE provides leadership and assistance to school divisions in developing effective and comprehensive nutrition services that result in children making educated, healthful choices.

Virginia Department of Health: The Virginia Department of Health strives to promote and protect the health of all Virginians.

Virginia Farm Bureau Federation: Farm Bureau is a non-governmental, nonpartisan, voluntary organization committed to protecting Virginia's farms and ensuring a safe, fresh and locally grown food supply. The organization works to support its producer members through legislative lobbying, leadership development programs, commodity associations, rural health programs, insurance products, agricultural supplies and marketing, and other services.

Virginia Food System Council: This statewide council is working to advance a nutrient-rich and safe food system for Virginians at all income levels, with an emphasis on access to local food, successful linkages between food producers and consumers, and a healthy viable future for Virginia's farmers and farmland.

Virginia State University (VSU): VSU is one of Virginia's land-grant universities and is guided by the University's mission of teaching, research and public service. Its Department of Agriculture and Human Ecology prepares students for careers in agricultural business, animal science, plant, soil and environmental science, nutrition and dietetics, family and consumer science, textile and apparel merchandizing, hospitality management, agricultural education and government. In its Cooperative Extension Program, the school transfers research-based information on agriculture, youth, environment and health to improve the life of its clientele.

Virginia Tech Department of Agriculture and Extension Education: This undergraduate and graduate degree at Virginia Tech prepares students for success in professions that include formal and non-formal teaching and learning in agriculture and leading agricultural organizations and communities.

Virginia Tech Roanoke Center: The center offers workshops, graduate courses, and public lectures. It also serves as a bridge to help students connect to the full scope of resources represented by Virginia Tech and strives to provide timely response and leadership to needs and opportunities within the Roanoke region.

Washington and Lee University: Located in Lexington, Virginia, Washington and Lee is composed of two undergraduate divisions, the College and the Williams School of Commerce, Economics, and Politics; and a graduate School of Law. The undergraduate institution offers 40 majors, 20 minors and more than 1,100 courses.

Williamsburg Farmers Market: This market provides a space for growers and producers of Eastern Virginia to sell fresh seasonal food and farm products directly to the residents and visitors in the Greater Williamsburg area.

Websites for Participating Organizations of the Virginia Food System Council

Appalachian Sustainable Development: <http://www.asdevelop.org/>

Catawba Sustainability Center: <http://www.vtrc.vt.edu/catawba/>

Center for Rural Virginia: <http://www.cfrv.org/>

Federation of Virginia Food Banks: <http://vafoodbanks.org/>

Harrisonburg City Public Schools: <http://harrisonburg.k12.va.us/>

HomeGrown Virginia: <http://www.homegrownvirginia.com>

International Food Policy Research Institute: <http://www.ifpri.org/>

Jefferson Area Board for Aging: <http://www.jabacares.org/>

Local Food Hub: <http://localfoodhub.org/>

Local Food Project at Airlie: <http://www.airlie.org/>

Lulus Local Food: <http://luluslocalfood.com/>

Mattawoman Creek Farms: <http://www.mattawomancreekfarms.com/>

Piedmont Environmental Council: <http://www.pecva.org/>

Scale, Inc.: <http://www.ruralscale.com/>

Society of St. Andrew: <http://www.endhunger.org/>

University of Virginia Food Collaborative: <http://www.virginia.edu/vpr/sustain/foodcollaborative/>

University of Virginia Institute for Environmental Negotiation: <http://www.virginia.edu/ien/>

Virginia Association for Biological Farming: <http://www.vabf.org/>

Virginia Beach Department of Agriculture: <http://www.vbgov.com/>

Virginia Cooperative Extension: <http://www.ext.vt.edu/>

Virginia Department of Agriculture and Consumer Services (VDACS): <http://www.vdacs.virginia.gov/>

Virginia Department of Conservation and Recreation: <http://www.dcr.virginia.gov/>

Virginia Department of Education: <http://www.doe.virginia.gov/>

Virginia Department of Health: <http://www.vdh.state.va.us/>

Virginia Farm Bureau Federation: <http://vafarmbureau.org/>

Virginia Food System Council: <http://www.virginiafoodsystemcouncil.org>

Virginia State University: <http://www.vsu.edu/>

Virginia Tech <http://www.vt.edu/>

Virginia Tech Roanoke Center: <http://www.vtrc.vt.edu/>

Washington and Lee University: <http://www.wlu.edu/>

Williamsburg Farmers Market: <http://www.williamsburgfarmersmarket.com/>

Appendix D.

Additional Resources

Buy Fresh Buy Local: The campaign helps consumers find local products while building relationships between growers, food artisans, farmers' markets retailers, restaurants, and institutions. The Piedmont Environmental Council launched the Virginia campaign in 2006.

Center for Rural Culture: The Center for Rural Culture is a not-for-profit organization whose mission is to educate, promote and inspire members of our community to sustain a culture that supports agriculture and the local economy, protects natural and historic resources, and maintains our rural character and traditions.

Community Food Security Coalition (CFSC): The CFSC is a North American coalition of diverse people and organizations working from the local to international levels to build community food security. The Coalition provides a variety of training and technical assistance programs for community food projects, supports the development of farm to school and farm to college initiatives, advocates for federal policies to support community food security initiatives, and provides networking and educational resources.

Crossroads Resource Center: A non-profit organization based in Minneapolis, Minnesota that works with communities and their allies to foster democracy and local self-determination. Ken Meter, President, of the Crossroads Resource Center specializes in devising new tools communities can use to create a more sustainable future. Ken conducted local food and farm studies in the Shenandoah Valley, Martinsville/Henry County Area, and the eastern Chesapeake Bay region of Virginia.

Farm to College: Farm-to-college programs connect colleges and universities with producers in their area to provide local farm products for meals and special events on campus. These programs may be small and unofficial, mainly involving special dinners or other events, or they may be large and well-established, with many local products incorporated into cafeteria meals every day.

National Sustainable Agriculture Project: The NCAT (The National Center for Appropriate Technology) Sustainable Agriculture Project provides information and technical assistance through their website, publications and other media to farmers, ranchers, Extension agents, educators, and others involved in sustainable agriculture in the United States. This project was formally known as ATTRA.

Virginia Farm to School program: This is an effort to increase the amount of fresh and nutritious Virginia Grown products offered in schools and to promote opportunities for schools and local farmers to work together.

Websites for Other Resources:

Buy Fresh Buy Local campaign in Virginia: <http://www.buylocalvirginia.org/>

Center for Rural Culture: <http://www.centerforruralculture.org/>

Community Food Security Coalition: <http://www.foodsecurity.org/>

Crossroads Resource Center: <http://www.crcworks.org>

Farm to College: <http://www.farmtocollege.org/resources>

National Sustainable Agriculture Project: <https://attra.ncat.org/>

Virginia Farm to School program: <http://www.vdacs.virginia.gov/marketing/farm.shtml>

Local Food Reports from Other States

State	Local Food Plan	Year Published
California	The Vivid Picture Project http://www.vividpicture.net/documents/The_New_Mainstream.pdf	2005
Colorado	Live Well Colorado: Food Policy Blueprint http://about.livewellcolorado.org/assets/pdf/resources/blueprints/final-food-policy-blueprint.pdf	2010
Illinois	Local Food, Farms and Jobs http://foodfarmsjobs.org/	2009
Iowa	Iowa Local Food Farm Plan http://www.leopold.iastate.edu/sites/default/files/pubs-and-papers/2011-01-iowa-local-food-and-farm-plan.pdf	2011
Minnesota	Marketing Local http://www.extension.umn.edu/distribution/businessmanagement/DF7539.html	2008
Montana	Grown Montana http://www.growmontana.ncat.org/unlocking.php	2006
New Mexico	Dreaming New Mexico http://www.dreamingnewmexico.org/files/DNMAgeofLocalFoodshedsandAFairTradeStateBooklet.pdf/view	2010
New York	FoodNYC http://www.mbpo.org/uploads/policy_reports/mbp/FoodNYC.pdf	2010
North Carolina	From Farm to Fork http://www.cefs.ncsu.edu/resources/stateactionguide2010.pdf	2010
Oregon	Everyone Eats! http://www.emoregon.org/pdfs/IFFP/IFFP_N-NE_Portland_Food_Assessment_full_report.pdf	2006
Philadelphia	Eating Here http://www.dvrpc.org/reports/10063.pdf	2011
Vermont	Farm to Plate Initiative http://www.vsjf.org/project-details/5/farm-to-plate-initiative	2011
Washington	Future of Farming http://agr.wa.gov/fof/	2010
Wisconsin	Scaling Up: Meeting the Demand for Local Food http://www.cias.wisc.edu/wp-content/uploads/2010/01/baldwin_web_final.pdf	2009

Additional Reports of Interest, National and International

State	Local Food Plan	Year Published
California	AgVision 2030 http://www.cdfa.ca.gov/agvision/docs/Immediate_Action_Items.pdf	2010
England	Making Local Food Work http://www.makinglocalfoodwork.co.uk	2010
Iowa	Cultivating Resilience – A Food System Blueprint http://www.iowafoodsystemscouncil.org/cultivating-resilience/	2011
Italy	Local Food Production Comparative Report http://www.rimisp.org/getdoc.php?docid=6351	2006
Maine	Get Real – Get Local! http://www.maine.gov/agriculture/co/Local%20Ag%20Development%20Task%20Force%20Final%20Report.pdf	2004
Michigan	Good Food Charter http://www.michiganfood.org/assets/goodfood/docs/MI%20Good%20Food%20Charter%20Final.pdf	2010
Ohio	Planting the Seeds of Sustainable Economic Development http://cffpi.osu.edu/docs/KnoxCo_Assessment.pdf	2009
Ontario	Scaling Up Urban Agriculture in Toronto http://metcalffoundation.com/wp-content/uploads/2011/05/scaling-urban-agriculture.pdf	2010
USDA	Comparing the Structure, Size, and performance of Local and Mainstream Food Supply Chains http://www.ers.usda.gov/Publications/ERR99/ERR99.pdf	2010
Vancouver	Food Secure Vancouver Baseline Report http://vancouver.ca/commsvcs/socialplanning/initiatives/foodpolicy/tools/pdf/FoodSecure_Baseline.pdf	2009

Appendix F.

ANNUAL COMMUNITY FOOD DOLLARS GENERATED IF EACH HOUSEHOLD IN VIRGINIA SPENT \$10 / WEEK OF THEIR TOTAL FOOD BUDGET ON FRESH LOCAL FOOD AND FARM-BASED VIRGINIA PRODUCTS

Compiled in 2007 by Matt Benson and Eric Bendfeldt, VCE -Community Viability Specialists

DISTRICT TOTALS	
Extension District	Economic Impact
Central District	\$185,212,040
Northern District	\$638,256,320
Southeast District	\$616,755,880
Southwest District	\$211,699,800
TOTAL	\$1,651,924,040
CENTRAL DISTRICT	
County/City	Economic Impact
Amelia County	\$2,635,880
Amherst County	\$7,037,160
Appomattox County	\$3,233,880
Bedford City	\$1,430,520
Bedford County	\$15,435,160
Brunswick County	\$4,048,200
Buckingham County	\$3,447,080
Campbell County	\$12,215,320
Charlotte County	\$3,193,840
Cumberland County	\$2,264,600
Danville City	\$12,104,040
Dinwiddie County	\$5,540,080
Emporia City	\$1,355,640
Franklin County	\$13,055,120
Goochland County	\$4,100,720
Greensville County	\$2,084,680
Halifax County	\$9,020,960
Henry County	\$13,760,760
Lunenburg County	\$3,048,760
Lynchburg City	\$15,070,120
Martinsville City	\$3,772,080
Mecklenburg County	\$9,528,480
Nelson County	\$4,812,080
Nottoway County	\$3,463,720
Patrick County	\$5,331,040
Pittsylvania County	\$15,256,280
Powhatan County	\$4,709,120
Prince Edward County	\$4,256,720
Subtotal	\$185,212,040

NORTHERN DISTRICT	
County/City	Economic Impact
Albemarle County	\$20,313,800
Alexandria City	\$35,571,120
Arlington County	\$48,163,440
Augusta County	\$15,315,040
Bath County	\$1,597,440
Buena Vista City	\$1,463,280
Charlottesville City	\$9,499,360
Clarke County	\$3,109,080
Clifton Forge City	\$1,075,880
Culpeper County	\$8,400,080
Fairfax City	\$4,476,160
Fairfax County	\$201,165,120
Falls Church City	\$2,440,880
Fauquier County	\$12,759,240
Fluvanna County	\$5,135,520
Frederick County	\$14,145,040
Fredericksburg City	\$4,801,680
Greene County	\$3,622,840
Harrisonburg City	\$7,732,920
Highland County	\$996,840
Lexington City	\$1,253,720
Loudoun County	\$48,554,480
Louisa County	\$7,276,880
Madison County	\$3,011,320
Manassas City	\$6,597,760
Manassas Park City	\$2,171,000
Orange County	\$6,861,920
Page County	\$5,759,000
Prince William County	\$65,346,840
Rappahannock County	\$1,857,440
Rockbridge County	\$5,467,280
Rockingham County	\$15,531,360
Spotsylvania County	\$21,809,320
Stafford County	\$20,914,400
Staunton City	\$5,659,160
Warren County	\$7,682,480
Waynesboro City	\$4,831,320
Winchester City	\$5,885,880
Subtotal	\$638,256,320

SOUTHEAST DISTRICT	
County/City	Economic Impact
Accomack County	\$10,700,560
Caroline County	\$5,391,880
Charles City County	\$1,609,400
Chesapeake City	\$41,231,320
Chesterfield County	\$58,110,000
Colonial Heights City	\$3,961,880
Essex County	\$2,783,560
Franklin City	\$2,021,760
Gloucester County	\$8,144,760
Hampton City	\$30,581,200
Hanover County	\$18,958,680
Henrico County	\$63,827,920
Hopewell City	\$5,167,760
Isle of Wight County	\$7,103,200
James City County	\$13,426,400
King & Queen County:	\$1,662,440
King George County	\$4,307,160
King William County:	\$3,057,600
Lancaster County	\$3,619,200
Mathews County	\$2,932,280
Middlesex County	\$3,595,800
New Kent County	\$3,272,360
Newport News City	\$40,261,520
Norfolk City	\$50,065,600
Northampton County	\$3,780,920
Northumberland County	\$4,608,760
Petersburg City	\$8,276,840
Poquoson City	\$2,365,480
Portsmouth City	\$22,119,760
Prince George County	\$6,138,080
Richmond City	\$48,474,400
Richmond County	\$1,920,880
Southampton County	\$3,860,480
Suffolk City	\$15,887,040
Surry County	\$1,871,480
Sussex County	\$2,456,480
Virginia Beach City	\$89,139,960
Westmoreland County	\$5,257,200
Williamsburg City	\$2,379,000
York County	\$12,424,880
Subtotal	\$616,755,880

SOUTHWEST DISTRICT	
County/City	Economic Impact
Alleghany County	\$4,171,960
Bland County	\$1,784,640
Botetourt County	\$7,147,400
Bristol City	\$4,537,000
Buchanan County	\$6,286,800
Carroll County	\$8,083,400
Covington City	\$1,681,160
Craig County	\$1,423,760
Dickinson County	\$4,076,800
Floyd County	\$3,775,200
Galax City	\$1,698,320
Giles County	\$4,195,360
Grayson County	\$4,986,800
Lee County	\$5,954,000
Montgomery County	\$18,261,880
Norton City	\$1,025,960
Pulaski County:	\$8,789,040
Radford City	\$3,294,200
Roanoke City	\$24,042,200
Roanoke County:	\$20,140,120
Russell County	\$7,062,120
Salem City	\$5,538,000
Scott County	\$6,095,440
Shenandoah County	\$9,663,680
Smyth County	\$8,018,920
Tazewell County	\$10,839,400
Washington County	\$12,783,160
Wise County	\$9,468,160
Wythe County:	\$6,874,920
Subtotal	\$211,699,800

Appendix G.

Glossary of Terms

Community-based, Sustainable Food System: According to a University of Michigan study, this is a food system in which everyone in the community has financial and physical access to culturally appropriate, affordable, nutritious food that was grown and transported without degrading the natural environment, and in which the general population understands nutrition and the food system in general. Community-based food systems are socially embedded, economically invested, and integrated across food production, processing, distribution, consumption, and waste disposal. They can also enhance the economic, social environmental and nutritional health of a particular place (Arndt, et al., 2009; Garrett & Feenstra, 1999).

Community Supported Agriculture (CSA): According to the USDA, a CSA consists of a community of individuals who pledge support to a farm operation so that the farmland becomes, either legally or spiritually, the community's farm, with the growers and consumers providing mutual support and sharing the risks and benefits of food production. Typically, members or 'share-holders' of the farm or garden buy a subscription in advance of the planting season to cover the anticipated costs of the farm operation and farmer's salary. In return, they receive shares in the farm's bounty throughout the growing season, as well as satisfaction gained from reconnecting to the land and participating directly in food production. Members also share in the risks of farming, including poor harvests due to unfavorable weather or pests. Supporting a CSA provides the shareholder with fresh food grown closer to home and a chance to interact with their grower directly (DeMuth, 1993).

Economic Leakage: Economic leakage simply means total sales within an area are not as much as they could be based on the area's population, income, capacity and existing resources (Bendfeldt et al., 2011).

Food miles: According to the National Center for Appropriate Technology (NCAT) Sustainable Agriculture Project, food miles are the distance food travels from the location where it is grown to the location where it is consumed, or in other words, the distance food travels from farm to plate. Reducing this distance may reduce transportation costs, save energy, reduce pollution and provide the consumer with fresher food (Hill, 2008).

Food security: The USDA (2009) defines food security as access by all members of a household at all times to enough food for an active, healthy life. Food security includes at a minimum:
The ready availability of nutritionally adequate and safe foods.
Assured ability to acquire acceptable foods in socially acceptable ways (that is, without resorting to emergency food supplies, scavenging, stealing, or other coping strategies).

Food shed: This term signifies the geographic area from which a population or community obtains its food supply. Analysis of a food shed observes the sources of food for a population, the flow of food from its origin to its destination, where it is consumed. This examination can evaluate how these aspects impact the environment and the food security of populations (Peters et al., 2009).

Local food: Food produced and consumed within a reasonable distance of each other. There are no set limitations as to the boundaries of the food being grown, caught, or raised, however, the goal is to optimize agricultural profits kept in the immediate area. Buying and producing local food supports local food systems. According to the definition adopted under the 2008 Food, Conservation, and Energy Act (2008 Farm Bill) for local food, the total distance that a product can be transported and still be considered a locally or regionally produced agricultural food product is less than 400 miles from its origin, or within the State in which it is produced.

Local food systems: When consumers actively buy local food, they are helping to maintain the surrounding food system, in turn, increasing growth in the local economy. Sourcing and purchasing these products reduces the number of "food miles," supports the community's farmers, and promotes fresh foods. For this system to be sustainable, the production and processing system used to generate local food should be less fossil fuel-intensive, destructive to the nearby environment, or fail to support the producers.

Ombudsman: This is a person who acts as a trusted intermediary between an organization and some internal or external constituency while representing not only but mostly the broad scope of constituent interests. Usually appointed by the organization, but sometimes elected by the constituency, the ombudsman may, for example, investigate constituent complaints relating to the organization and attempt to resolve them, usually through recommendations (binding or not) or mediation. (Meriam-Webster, 2011)

Resource Management Plan: In terms of water resources, a resource management plan promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.

Sustainable agriculture: In the 1990 Farm Bill, sustainable agriculture is described as an integrated system of plant and animal practices having a site-specific application that will, over the long term:

- satisfy human food and fiber needs;
- enhance environmental quality and the natural resource base upon which the agricultural economy depends;
- make the most efficient use of non-renewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls;
- sustain the economic viability of farm operations; and
- enhance the quality of life for farmers and society as a whole.

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