

Nelson County Food System Audit

Final Report

University of Virginia

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The student project team would like to thank the numerous Nelson County community members who generously gave their time and knowledge to this food system audit. We could not have completed the project without their involvement and support.

I. PROJECT OVERVIEW

Our team conducted an audit of the food systems of Nelson County, Virginia, in an effort to acquire an understanding of all aspects of the county's existing food system. A pre-designed audit (available in Appendix A) was used to assess five areas of the food system: public health, economic development, environment, social equity, and land conservation/access to land for food production. Strengths, opportunities, and challenges were identified for each category after reviewing relevant policy documents and interviewing community stakeholders. Community priorities were also identified for the county through stakeholder interviews. The priorities were compiled into five common themes – support more local purchasing, increase variety of crops and land in production, education about food and obesity prevention, support community gardens, and improve food access. Policy examples specific to each priority are included in this report to encourage implementation appropriate for the County. We intend the completed audit and compiled report to initiate and stimulate a continuing conversation surrounding Nelson County's food system.

II. CHARACTERIZATION OF COUNTY

Nelson County was formed in 1807 and has a rich agricultural history.¹ The area grew as an agricultural center producing apples, chestnut trees, and tobacco. Almost the geographic center of Virginia, Nelson County is 471 square miles (302,000 acres). Its varied topography extends from the Blue Ridge Mountains to the flood plains of the James River. Elevations range from 500 feet to 4,000 feet.²

¹ <http://nelsoncounty.com/community/ataglance/>

² Ibid.

As a hub of agribusiness activity, Nelson County has 462 farms (456 farms in 2002, increase of 1%), 73,149 acres of land in farms (84,691 acres in 2002, decrease of 14%), 158 acres is average size of farm (186 acres in 2002, decrease of 15%).³ Nearly 24% of the county is designated farmland. Among Virginia Counties, Nelson ranked fourth within the category of fruits/tree nuts and berries – Nelson’s primary crops are apples and grapes.⁴ In 2007, Nelson businesses sold over \$12 million of agricultural products and 4% of the workforce is in agriculture.⁵

The following demographic statistics provide a picture of Nelson County population compared to the state of Virginia:

	Nelson County	Virginia
Total Population ⁶	14,445	7,882,590
Individuals Under Poverty Level ⁷	13.2%	10.2%
Under age 18 in poverty ⁸	18.1%	13.6%
Number of Students ⁹	1969	n/a
Number of Students Receiving Free and/or Reduced Lunch (2009-2010) ¹⁰	47.8%	37.2%

³ 2007 Census of Agriculture

⁴ Ibid.

⁵ Ibid.

⁶ 2000 Census Estimates

⁷ 2008 US Census Estimates

⁸ Ibid.

⁹ Nelson County Public Schools - <http://www.nelson.k12.va.us/>

¹⁰ <http://www.doe.virginia.gov>

III. PROJECT METHOD:

Documents:

Our team reviewed relevant Nelson County policy documents that address public health, economic development, environmental regulations, social equity, and land conservation. All documents were assessed to determine how the county is fostering a sustainable food system. Documents and relevant county specific websites were divided among team members as follows:

Land use/planning documents:

- Nelson County Comprehensive plan (Sara Teaster)
- Current Zoning Ordinance (Dana Smith)
- Current Subdivision Ordinance (Keith Crawford)

Economic Development documents and web pages (Keith Crawford):

- Agri-business webpage (<http://nelsoncounty.com/business/agri-business/>)
- Economic Development Authority Strategic Plan (2003-04)
(<http://nelsoncounty.com/business/economic-development-authority-strategic-plan/>)
- Economic Development Authority Annual Report (most recent online 2007)
(<http://nelsoncounty.com/business/economic-development-authority-2007-annual-report/>)
- Rockfish Valley Foundation (<http://www.rockfishvalley.org/blog/>)
- Rural Nelson (<http://www.ruralnelson.org/>)
- Nelson County Farmers Market (<http://www.nelsonfarmersmarket.com/>)
- Local Food Hub (<http://www.localfoodhub.org/>)

Public Schools, Health and Wellness Documents (Dana Smith):

- Nelson County Pantry website (<http://nelsoncountypantry.wordpress.com/>)

- Nelson County Public Schools Nutrition Program
(http://www.nelson.k12.va.us/Food%20Services/WEB_PAGES/HOME_PAGE.htm)
- Nelson County Public Schools Comprehensive Division Improvement Plan 2005-2011
- Nelson County Public Schools Student Wellness Statement
- Nelson County Public Schools Goals and Objectives 2009-10
- Nelson County Public Schools School Board Policy Manual
(<http://www.nelson.k12.va.us/District/Policy/policy.htm>)
- Nelson County Cooperative Extension (<http://offices.ext.vt.edu/nelson/>)
- Nelson County Parks and Recreation (<http://nelsoncounty.com/parksandrec/>)
- Nelson County Health Department
(<http://www.vdh.state.va.us/LHD/ThomasJefferson/Nelson/>)

Strengths, challenges, and opportunities for each category of the audit were identified after reviewing these documents and a full analysis is available in the “Findings” section of this report.

Community Engagement:

After reviewing relevant documents for food policy language, our team engaged the Nelson County community in the policy assessment process. It was extremely important to engage community members in the process to ensure an accurate portrayal of existing policies and implementation and to identify the shared food system goals for the community. We arranged meetings with government representatives and community members to review our findings, ensure we identified all relevant documents, gather feedback, and identify community priorities (see Appendix D for notes from community meetings). The following community members were contacted to interview as they represented a comprehensive cross section of

Nelson County food system interests within both government and non-government sectors:

- Fred Boger, Nelson County Planning Director
- Connie Brennan, Board of Supervisors
- Roger Collins, Nelson County Public School Superintendent
- Maureen Kelly, Nelson County Economic Development and Tourism
- Frances Mitchell, Jefferson Area Board for Aging, Nelson County Case Manager
- Beth Morris, Nelson County Public Schools Food Occupations Director
- Jim Saunders, Saunders Brothers Orchard, Director of Human Resources
- Gary and Jeanne Scott, Twin Springs Farm, owners

For all community members contacted, a draft audit was provided in advance of meeting for review. During our meetings, we asked if there were any questions about our methodology or findings. We also inquired about any existing policies or programs that were not already identified in the audit. Community members were also asked to identify their four to six priorities for food system policies they would like Nelson County to adopt. This brainstorming helped engage community members to actively think about future policies that will promote a sustainable food system for their county. Five priorities were repeatedly identified in interviews and recognized as the shared community priorities for Nelson County food system policy:

Priority 1- Support More Local Purchasing

Priority 2- Increase Variety of Crops and Land in Production

Priority 3- Educate Nelson County about food issues.

Priority 4 - Support Community Gardens

Priority 5 - Improve Access to Food

Priorities and associated policy options implemented in other localities are identified in

the “Community Priorities” section of this report to encourage implementation appropriate for the county.

All community members involved in the engagement process received a final copy of the final audit including policy examples for identified priorities. Community members also received a thank you note for their participation and follow up email encouraging them to contact us with any further thoughts or recommendations. All community engagement participants were also invited to attend the final presentation of findings on Tuesday, May 4, 2010. County officials are encouraged to share the findings of the audit with all county officials and make the information available to the public. We hope the audit will help the county recognize policy areas currently being addressed, areas of opportunity, and future policy priorities as identified by the Nelson County Community.

IV. ANALYSIS OF FINDINGS

The following analysis of findings is divided by audit categories – public health, economic development, environmental benefits, social equity, and land conservation. Strengths, challenges, and opportunities have been identified for each category based upon review of relevant documents and community feedback. Many of the opportunities identified also overlap with community priorities and are noted as such. For the complete audit findings and supplemental notes, please see Appendix A and B.

Public Health

The first aspect of the food system examined was public health. In looking at Nelson County’s public health systems, we looked closely at Nelson County’s public schools to see how the county supports local food sourcing and healthy food options in their schools. This involved understanding school policies and funding resources that contribute to decision making abilities.

The county's health as a whole was examined in similar ways to see how much local food is available for the general public and how taxing influences the availability of healthy food options throughout the county. Healthy foods not only mean access to produce and locally sourced foods, but also pesticide free foods.

Strengths:

1. **Nelson County Public School Wellness Policy** – The Child Nutrition and WIC Reauthorization Act of 2004 mandated all school districts with federally funded school meals develop and implement a wellness policy.¹¹ Nelson County Public Schools developed a comprehensive wellness policy, approved by the Student Health Advisory Board, that includes nutrition guidelines, vending machine regulations, and physical education standards.
2. **Buy Fresh / Buy Local and Farmer's Markets** – The Buy Fresh / Buy Local campaign sponsored by the Piedmont Environmental Council and the Nelson County Farmer's Markets provide opportunities for consumers to find local producers selling fresh, healthy food. The campaign provides contact information for producers in the county while the farmer's market provides a direct opportunity for connection.

Challenges:

1. **Food Traditions** – Some family food traditions within Nelson include a heavy reliance on high fat, high cholesterol cooking methods that lead to significant health issues including obesity, diabetes and high cholesterol levels. These health problems can lead to stroke or heart attack. These food traditions impact family members of all ages

¹¹ <http://www.schoolwellnesspolicies.org/>

from school children to the aging. The introduction of new foods and cooking techniques that support personal health is difficult due to these unhealthy eating habits.

2. Limited Funding for School Purchasing – School lunches are at the confluence of educational, welfare, and agricultural policies. Federal school lunch procurement policies and limited funding through the National School Lunch Program administered by the USDA Food and Nutrition Service at the federal level limit the amount of fresh fruits and vegetables that can be purchased from local producers that may require a higher price to ensure economic viability.

3. Minimal Nutrition Education in School Curriculum – During community interviews, both the Nelson County Superintendent and the Food Occupations Director mentioned limited nutrition education. While students receive minimal nutrition education in some health courses, Virginia Standards of Learning do not require nutrition education at all grade levels. Limited time during lunch periods also makes it difficult to provide samples of healthy new food that encourage better nutrition.

Opportunities:

1. Educational Programs – There is an opportunity to increase nutrition, food, and health education throughout Nelson County. Programs could be initiated in the public schools that provide family education workshops on such topics as healthy cooking and gardening. There is also opportunity for the County to develop a comprehensive health improvement strategy that incorporates wellness education. See “Educate Nelson County About Food and Obesity Prevention” community priority for more information.

- 2. Reduce Community Exposure to Pesticides** – There are currently no local regulations or guidelines to limit pesticide application on county owned or agricultural properties. There is an opportunity for the county to model ecological and health safety by implementing a policy to use limited or no pesticides in public areas and to carefully manage application. Nelson County could also work with farmers to seek alternatives to pesticide use and ensure farm employees receive appropriate protection and training when pesticides are applied.

Economic Development

The economic development category analyzed how local governments and businesses support local agribusinesses. The areas focused on were tax structures, distribution networks, processing infrastructure, local business, and how the county has or has not supported these endeavors. Agricultural businesses in Nelson County need to be economically viable to continue producing local food.

Strengths:

- 1. Agricultural Land Use Tax** – Nelson County has an agricultural land use taxation policy that assesses agricultural properties greater than 20 acres with a real property value of \$0.55 for every \$100 of assessed value. This tax program reduces expenses for farm owners and encourages owners to keep their land in agricultural production instead of selling for development.
- 2. Local Food Hub** – The Local Food Hub is a regional distribution center started in summer 2009. Nelson County Industrial Development Authority provided \$10,000 in funding and represented the only county to provide funding. The Local Food Hub purchases produce from more than half a dozen farms in Nelson County and strives to

“to strengthen and secure the future of a healthy regional food supply by providing small local farmers with concrete services that support and advance their economic vitality and promote stewardship of the land.”¹²

Challenges:

- 1. Local Purchasing Funding & Policy** – While there is a desire to support local businesses, there is no formal policy or funding set aside for the purchase of locally grown or prepared foods at the county level.
- 2. Limited Communication Infrastructure** – Nelson farmers are currently limited by the county’s limited communications infrastructure that does not include a broadband network. This makes it difficult for Nelson businesses to communicate with larger neighboring markets including Charlottesville and Lynchburg to process sales orders through effective web based systems. Fortunately, Nelson County was awarded a \$1,826,646 grant on March 25, 2010 from the American Recovery and Reinvestment Act, or stimulus bill, to expand broadband internet service in rural areas of the County.¹³

Opportunities:

- 1. Local Purchasing** – Increased purchasing of locally grown food could greatly increase support for local growers and work toward making farming in Nelson County an economically viable profession. Please see “Support More Local Purchasing” priority for more details.
- 2. Increased Production and Niche Markets** – There is opportunity for Nelson County growers to increase food production by growing more intensively on the land and

¹² <http://www.localcollectual.com/content/view/1383/213/>

¹³ <http://nelsoncounty.com/government/2010/03/31/nelson-county-awarded-broadband-funding/>

searching for niche markets. With increased local purchasing and other economic supports, there will also be opportunity for new farmers to enter the field. Also see “Increase Variety of Crops and Land in Production” community priority.

3. **Reevaluate Land Use Taxation Structure** – Although the current taxation system benefits farms over 20 acres, the presence of very productive produce farms under 20 acres operating in the county was brought to our attention during community interviews. These smaller farms contributing greatly to the local food system do not benefit from the current taxation structure and may be limited in their scope and growth opportunities due to the higher tax rate. There is an opportunity to reevaluate the tax structure to benefit productive farms, regardless of acreage.

Environmental Benefits

In the environmental benefits audit category, we examined what county policies exist to protect environmental quality in relation to agricultural production. This includes addressing nonpoint source pollution from agricultural production, reducing food waste, and reducing pesticide and herbicides in ground and surface water.

Strengths:

1. **Riparian buffers** - Nelson County Comprehensive Plan outlines the need for riparian buffers to protect local streams, lakes and estuaries. Naturally vegetated stream buffers provide a filtration system for stormwater runoff and are especially important in agricultural areas where excess manure and herbicides may be entering the waterways

Challenges:

- 1. Environmental regulations are cost prohibitive for small farmers** – Some environmental regulations that improve water, air and soil quality are difficult and sometimes cost prohibitive for small farmers to implement. Pending statewide stormwater regulation restrictions targeted to improve the Chesapeake Bay may increase farming expenditures. In addition, USDA regulations targeted at larger operations make it challenging for many small producers who are unable to meet infrastructure requirements.

Opportunities:

- 1. Reduce Food Waste** – Nelson County does not have any policy to regulate or manage food waste on a large scale. There is great opportunity to convert food waste and yard scraps into compost to be returned to farms and community gardens. Reducing food waste and/or composting was not mentioned by any community members, but could be a compliment to the food system.
- 2. Reduce Pesticide Use** – There are no existing county level regulations or incentives to use fewer pesticides in Nelson County. Please see “reduce community exposure to pesticides” under “public health” for more details about this opportunity.

Social Equity

Social equity addresses the county’s ability to provide for lower income residents’ needs. This category involved examining transportation structures to and from food sources, availability of fresh food in low-income neighborhoods, and how the county provides for and distributes emergency food sources. Migrant work forces, and farm laborers pay and treatment were also an area of focus.

Strengths:

1. **Community Connections** – There are several nonprofit and social programs already in existence in Nelson County. The food pantry, JAUNT buses, and JABA senior center provide excellent examples of community members assisting vulnerable populations such as older adults and low-income families.
2. **Nelly May Bucks Program** – Nelly May Bucks is a program organized through the Nellysford Farmer's Market for senior citizens. The program distributes \$2000 worth of vouchers to senior centers for use at the farmer's market to increase access to healthy, local foods for this vulnerable population. The program is funded through market vendor fees.

Challenges:

1. **Transportation distances / decentralized population** – Access to food within Nelson is difficult due to its decentralized population and travel distances to many rural sections of the county. These distances make the cost of food distribution higher and make it more difficult for food retailers to achieve financial viability. Transportation is further challenged by Nelson's mountainous terrain.

Opportunities:

1. **Link Food Distribution and Medical Assistance Programs** – Medical assistance programs through JABA and the senior center already link food assistance with medical care for seniors in the county. This program of food delivery could be expanded to assist other populations as well.
2. **Encourage Local Grocers to Carry Healthy Food** – As mentioned above, travel distances make access to food difficult for some Nelson County residents. To

alleviate some of the challenges of distances, small grocery stores and convenience stores already located near residences could stock more healthy food and few prepared, packaged foods. The county could implement an incentive program such as slightly reducing taxes to encourage stores to carry more healthful foods.

Land Conservation / Access to Land for Food Production

The last area of focus assessed how the county plans for long term land conservation programs, long term food production, and how the county will manage growth based on food needs in the future.

Strengths:

1. **Land Area** – Nelson County has over 300,000 acres of land, with approximately 25% already in farmland. With slow population and development growth, the county has been able to conserve many open spaces and agricultural lands.
2. **Farming By-Right** – Nelson County Zoning ordinance allows farming by-right in most zones and contains few land use regulations thus permitting agricultural use in most areas. Some areas are regulated and may require special use permits for specific agriculturally related businesses.

Challenges:

1. **Geology Limits Land Suitable for Food Production** – The geology of Nelson County, which stretches from the peaks of the Blue Ridge Mountains to the flood plain of the James River, limits the land area suitable to food production. Many wooded mountain sides are steeply sloped or susceptible to flooding. As such, their

utility for food production is limited or cost prohibitive. (See Appendix E for critical slopes map)

2. **Government Restrictions on Land Use Unpopular** – While farming is a valued way of life and land use within the county, restrictions on land use are unpopular among county residents. As a result, restricting permissible land uses further to attempt to conserve land for agricultural use does not appear to be a viable policy approach.

Opportunities:

1. **Community Gardens** – Nelson County does not currently have any community gardens, but interest exists in the community. There are several publicly owned locations (such as school properties) that could be used for community gardens. Please see community priority “support community gardens” for information about how other localities have inventoried land and started community gardens.

V. COMMUNITY PRIORITIES

Five recurring community priorities arose during community interviews. Policy examples from other localities that support each priority are identified below. These policy examples are intended to initiate policy development and implementation in Nelson County to address the community identified priorities. Nelson County stakeholders will need to develop policies specific to the needs and desires of the county, but these examples can provide a starting point for conversation.

Priority 1 – Support More Local Purchasing

Several localities have identified purchasing local food as a way to increase economic

support for agriculture while also increasing healthy, whole food consumption by community residents. Procurement policies stating either a preference for local food or identifying percentage requirements for local purchasing can be developed for the entire county or for specific county entities such as the public school district. Examples of both are provided below with complete policy language in Appendix F.

County Level

Woodbury County, Illinois, has a local food purchase policy intended to “increase regional per capita income, provide incentives for job creation, attract economic investment, and promote the health and safety of its citizens and communities.”¹⁴ As of June 1, 2006, Woodbury County has given preference to locally produced organic food when a County department serves food in its usual course of business. The Woodbury County Jail, Work Release Center, and Juvenile Detention are the primary constituencies serving food on a regular basis. If local organic food is unavailable, preference is given to local non-organic food products over non-local foods. Woodbury County had an existing cooperative of growers before becoming the first county in the nation to mandate local purchase of organic food products. Although a rural economic development tool, the policy does enumerate policy provisions to protect the county from significant price increases from purchasing locally.¹⁵

Other localities have identified target percentages for purchase of locally grown and produced food to be served in programs. For example, in 2008 Toronto created a phased plan to achieve a goal of purchasing 50% of their food from local sources.¹⁶ Albany County, New

¹⁴ Woodbury County Policy for Rural Economic Revitalization - “Local Food Purchase Policy”

¹⁵ Woodbury County Press Release, Jan. 10, 2006

¹⁶ <http://network.nationalpost.com/np/blogs/toronto/archive/2008/10/31/toronto-s-target-50-local-food.aspx>

York, established a local food purchasing policy in 2008 with a resolution to allocate 10% of food budgets for locally produced foods (see Appendix F for resolution language).¹⁷

School Purchasing

The 2008 Farm Bill, which includes National School Lunch Program policies, allows schools to use geographic preference for the procurement of unprocessed food. Previously, schools were unable to state a preference in food bids.¹⁸ Since the change in federal policy in 2008, many schools have begun purchasing more locally grown food to supplement their lunch programs. In Virginia, a National Farm to School Week has also been designated to encourage schools to purchase food from local producers. Ann Cooper and Beth Collins, for the Lunchbox – a resource guide for school lunches, created a sample purchasing policy in 2007 for large scale “scratch cooking” that includes preference for locally grown food – the policy has been adopted by many school districts to meet their unique needs and circumstances.¹⁹ (see Appendix G for language)

Priority 2 – Increase Variety of Crops and Land in Production

A local purchasing policy will naturally increase the demand for local food, which will increase the need for a larger amount of land in production. Currently approximately twenty five percent of Nelson County is used for agricultural purposes, but much of the land is not farmed to its full potential for food production. Increasing the land in production and the variety of crops grown in the county were identified as a community priority both from current producers and government officials interested in economic development. Other localities interested in

¹⁷ <http://www.albanycounty.com/departments/legislature/resolutions/2008/20081208/08-496.pdf>

¹⁸ www.farmtoschool.org

¹⁹ http://www.thelunchbox.org/pdf/SAMPLE_PURCHASING_GUIDELINES2.pdf

increasing food production have focused on providing technical and research support through county positions. For example, Chatham County, North Carolina, county government has committed funding to support a sustainable agriculture agent through the North Carolina Cooperative Extension since 1994.²⁰ Through the position the “Growing Small Farms” program was created to provide support to local farmers. The agent “works with farmers to promote increased awareness, understanding, and practice of sustainable agriculture through monthly educational workshops, a website, on-farm visits, and other consultation.”²¹

Franklin County, New York, has also committed funding to establish a Rural and Agriculture Economic Development Specialist position.²² The specialist works with “farmers and rural entrepreneurs in Franklin & surrounding counties in the area of marketing, business development, regulations, alternative agriculture, diversification and small farm operations.”²³ (See Appendix H for a full description of the position). These established positions show county commitment and support to small farmers and increased agricultural production. Other opportunities exist to work with current agencies already active in the community such as the Virginia Cooperative Extension Master Gardeners and Future Farmers of America to identify new crops and growing methods and encourage more young farmers to enter the field.

Priority 3 – Educate Nelson County About Food and Obesity Prevention

As the national obesity epidemic continues to rise, it is increasingly important to make access to education about nutrition and healthy eating choices available to all citizens. The

²⁰ <http://www.ces.ncsu.edu/chatham/ag/SustAg/index.html>

²¹ Ibid.

²² <http://www.nnyagdev.org/PDF/NNYAgSpecFranklin04.pdf>

²³ Ibid.

Center for Disease Control (CDC) has issued recent figures that 17% of all children ages 2- 19 are obese.²⁴ (The CDC defines obese as having a body mass index of above the 95th percentile.) The CDC recommends that nutrition lessons be included in classrooms from pre-school to secondary school, but the School Health Policies and Programs study found that during a school year on average elementary schools spend only five teaching hours per year on such education. Middle schools on average only spend four hours and high schools are also only spending five hours on nutrition education.²⁵

Starting healthy eating habits early is a crucial step in having lifelong nutritional health. Recent media attention of the First Lady's campaign against childhood obesity has helped to bring light to the issues associated with childhood obesity. The CDC study shows lifelong connections between overweight children, and obesity rates as they become adults. The study also remarks that if a child is overweight by the age of eight, the obesity they face as adults will be more severe.²⁶ Initiatives across the country are trying to tackle the issues of educating children about healthy eating. One organization, The Food Trust, has started such a program in Philadelphia.²⁷

The goal of the program was to study changes in both overweight (85th -94.9th percentile) and obese children (95th percentile and above) over a two-year period. The study selected 1349 students from ten schools in the District of Philadelphia where 50% or higher percentage of the school population received free or reduced lunches. Areas of program initiatives included school

²⁴ <http://www.cdc.gov/obesity/childhood/index.html>

²⁵ <http://www.healthpolicyguide.org/doc.asp?id=6450>

²⁶ <http://www.cdc.gov/obesity/childhood/index.html>

²⁷ http://www.thefoodtrust.org/catalog/download.php?product_id=164

self-assessment, nutrition education, nutrition policy, social marketing, and parent outreach. The results were a 50% reduction in the number of overweight children, 7.5% reduction in the intervention schools, and 14.9% in the control schools after two years.

The Child and Adolescent Trial for Cardiovascular Health (CATCH) was a three-year program aimed at improving overall health and nutrition.²⁸ The program spanned 5,100 third and fourth graders in California, Louisiana, Minnesota, and Texas. The two teaching programs were the *Adventures of Hearty Heart and Friends* for five weeks, followed by the *Go for Health* curriculum, for eight to twelve weeks. The goals of the programs were to reduce sodium and fat intake and combined in class education as well as training for food service workers. After three years of the program fruit and vegetable consumption was increased by more than a half a serving a day and also resulted in an increased variety of fruit and vegetable choices. Daily calories from fat decreased by 3% and the fat calories served in school lunches decreased 7%. A three-year follow up study showed that results stayed the same.

Priority 4 – Support Community Gardens

Nelson County has expressed interest in creating community gardens for the purpose of food production, education, and increasing consumption of whole produce. Many localities across the country have identified similar priorities for community gardens. Although Portland, Oregon, is a much larger metropolitan area than Nelson County, their community garden program offers a model for inventorying potential garden sites and making community gardens a priority for the locality.

On November 24, 2004, the Portland, Oregon City Council passed the Portland Urban Agricultural Inventory Resolution that charged the city with creating an inventory of city owned

²⁸ <http://www.preventioninstitute.org/component/jlibrary/article/id-202/127.html>

land that may be suitable for community gardens and other agricultural uses.²⁹ This resolution built upon Portland's successful Community Gardens Program that had been in operation since 1975. In 2004, this program operated 28 community gardens throughout the city, which were developed and operated by volunteers and the Portland Park & Recreation staff. These community gardens annually donated 10,000 pounds of fresh vegetables to neighborhood emergency food pantries of the Oregon Food Bank.³⁰ Through land use policy, the City of Portland sought to:

“influence access to healthy food and strengthen communities. Creating community gardens in high density neighborhoods can provide a valuable resource to underserved communities who often have limited access to fresh produce and private open space. When residents have access to fresh fruits and vegetables, they are more likely to make healthy food choices. Gardening is an excellent form of physical activity for people of all ages. Nutritious diets that are rich in fruits and vegetables are associated with a reduced risk of numerous chronic diseases such as type II diabetes, heart disease, and certain cancers.”³¹

Priority 5 - Improve Access to Food

An increasing number of creative solutions are emerging to maintain small town grocery stores, which provide many benefits in addition to improved access to food. Local grocery stores retain payroll and tax revenue from food purchases within the local community and improve resident quality of life through reduced transportation demands and increased social interaction.

²⁹

http://www.preventioninstitute.org/sa/policies/policy_detail.php?s_Search=&issue=&env=&keyword=78&s_State=&jurisdiction=&year=&policyID=321

³⁰ http://eatbettermovemore.org/sa/policies/policy_detail.php?s_Search=urban+ag&policyID=321 (City of Portland, Oregon - Resolution No. 36272)

³¹

http://www.preventioninstitute.org/sa/policies/policy_detail.php?s_Search=&issue=&env=&keyword=78&s_State=&jurisdiction=&year=&policyID=321 (Strategic Alliance ENACT Local Policy Database, 4/8/10)

The Center for Rural Affairs highlights the following models that rural communities are using to keep grocery stores open in their towns.³²

Local Ownership:

Stapleton, a town of just over 300 residents in Logan County, Nebraska, surveyed its residents and found 95 percent of respondents wanted a grocery store in town. With the help of two local investors, a local resident stepped up to open a store. Local business people who understand the importance of their store to the community already own many rural grocery stores. Communities that face losing a store to a regional chain or are interested in opening a new small grocery store should look inward for resources and expertise from the community to operate the store.

Cooperative Ownership:

Residents of Walsh, Colorado, a town of 723 residents, used to drive over 30 minutes to the nearest grocery store. To solve the issue, over 300 residents pooled money to reopen a store. A cooperative ownership agreement was established and a \$160,000 interest-free loan helped the store open. Resident's money spent on groceries now stays in Walsh and the store can be responsive to the needs of the community.

Youth Affiliated:

Arthur, Nebraska, lost their local grocery store about ten years ago and residents drove 40 miles to the nearest store. An extracurricular entrepreneurial business development program assisted local high school students with market research, support, and a rental building. Within one year, eight students in the club opened the Wolf Den grocery in the town and gave the 144 town residents a new location to purchase groceries.

³² <http://www.cfra.org/newsletter/2009/10/sustaining-small-town-grocery-stores>

VI. CONCLUSION

Nelson County has a strong food and agricultural heritage that is highly valued among its residents. While the majority of its work force commutes to other jurisdictions for employment, agriculture has remained a central economic development strategy for the county. This focus has helped retain farmland in active production. Nelson's approval of agriculturally-related enterprises as a by-right land use promises to attract additional food-related investment to the county. As Nelson moves forward, there is a strong desire among farm owners to create positive change without additional restrictions on property rights. Policies and programs that provide incentives will be most effective in improving the health and prosperity of the Nelson County community and food system.

RESOURCES:

- “Addressing Childhood Obesity: Nutrition Education and Policies in Schools.” (2009). *Health Policy Guide*. Retrieved May 6, 2010 from <http://www.healthpolicyguide.org/doc.asp?id=6450>.
- Albany County, NY: Local Food Purchasing Policy Resolution. *Farmland Information Center*. Retrieved May 6, 2010, from http://www.farmlandinfo.org/index.cfm?function=article_view&articleID=37953.
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Nelson County Food System Audit		NOTE: References to "LOCAL FOOD" includes local wineries, breweries, and cideries.										Last updated: 4/28/10
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1. PUBLIC HEALTH												
				Comprehensive Plan	Zoning Ordinances	Plans/Strategies/Programs	Stand Alone Ordinances	Regional or State Guidelines	School Programming/Wellness Policy	School District Strategic Plan	Other	Citation of Language used
a. Reduce and Prevent Community Obesity and Chronic Illness												
1	Does the locality express a concern or a goal for improving public health?			no	no	no	no	yes	no	no		Nelson County Public School Wellness Policy, Policy Statement
2	Does the locality mention a goal to reduce obesity and/or chronic illness?			no	no	no	no	yes	no	no		Nelson County Public School Wellness Policy, Section D
3	Does the locality have an overall wellness plan?			yes	n/a	no	no	yes	no	no		Nelson County Public School Wellness Policy/ Nelson County Comprehensive Plan pg.9
4	Does the locality clearly allow, support, or advocate for Farm to School (or similar) programs - for educational purposes, or for provision of food for school cafeteria?			n/a	n/a	no	no	no	no	no		
5	Does the locality have other provisions for school purchasing of local or organic foods?			n/a	n/a	no	no	no	no	no		
6	Does the locality clearly have a policy to reduce availability of junk food in schools and public buildings (e.g., vending machines and purchasing options)?			n/a	n/a	no	no	yes	no	no		Nelson County Public School Wellness Policy, Section 2-A.4-6
7	Do the schools have a policy or program to educate cafeteria workers on preparation of fresh, local food and/or nutrient-rich food?			n/a	n/a	no	no	no	no	no		
8	Is the locality clearly encouraging or supporting the inclusion of food-based lesson plans in schools?			n/a	n/a	no	no	yes	no	no		Nelson County Public School Wellness Policy, Section 2-A.7
9	Does the locality clearly encourage and/or directly support establishment of school garden programs at all levels of K-12?			n/a	no	no	no	no	no	no		
10	Is the locality currently employing or considering a "joint use" agreement to open the use of school land for food production (school gardens, community gardens, community urban farm)?			n/a	no	no	no	no	no	no		
11	Does the locality encourage that chain restaurants provide consumers with calorie information on in-store menus and menu boards?			n/a	n/a	no	no	n/a	no	no		
12	Does the locality have a clear tax or other strategy to discourage consumption of foods and beverages with minimal nutritional value, such as sugar sweetened beverages?			no	n/a	no	no	n/a	no	no		
13	Does the locality have educational/promotional programs to discourage the use of Supplemental Nutrition Assistance Program (SNAP) for sodas, high sugar and low nutrient foods?			n/a	n/a	no	no	n/a	no	no		
14	Does the locality have a goal for increasing awareness of healthy food or lifestyle choices?			no	n/a	no	no	yes	no	yes		Nelson County Public School Wellness Policy, Section 2-D.a; Community Obesity Task Force - http://www.childhoodobesitytaskforce.org/
15	Has the locality adopted a clear policy defining "local" food?			no	no	no	no	no	no	no		
16	Does the locality have a clear goal that supports the production and distribution of local food?			no	no	no	no	no	no	no		Nelson County Comprehensive Plan, PEC Buy Fresh, Buy Local - http://www.buylocalvirginia.org/ ; Locally Grown Nelson - http://www.nelson.locallygrown.net/growers
17	Does the locality publish or support a public guide to local food?			n/a	n/a	no	no	no	no	yes		
18	Does the locality have a clear policy of encouraging (or giving preference to) event caterers or vendors that will use locally sourced food?			n/a	n/a	no	no	no	no	no		

	Does the locality develop media campaigns, utilizing multiple media channels (print, radio, internet, television, social networking, and other promotional materials) to promote healthy eating?	n/a	n/a	no	no	no	no	no	no	Last updated: 4/28/10
19		n/a	n/a	no	no	no	no	no	no	
20	Does the locality support or participate in a Food Policy Council?	n/a	n/a	no	no	no	no	no	no	
c. Flexible Policies and Zoning for creative and adaptive uses										
21	Does the code allow for and support protection of open space? for community gardens?	yes/no	yes/no	no	no	no	n/a	no	no	Nelson County Zoning Ordinance, Art. 3. Conservation District C-1, § 3-1 – 3-8 & Art. 4. Agricultural District A-1, § 4-1 – 4-11-3/ Nelson County Comprehensive Plan pg.38
22	Does the locality promote or enable easy accessibility to community gardens, for all neighborhoods and income levels?	no	no	no	no	no	no	no	no	
23	Are there land protections for farmers' markets?	yes	no	no	no	no	n/a	no	no	Nelson County Comprehensive Plan, pg. 32
24	Does the locality promote or enable easy, local access to community gardens by allowing small pocket parks throughout the locality to be used for, or transformed into community gardens?	no	no	no	no	no	no	no	no	
25	Does the code allow for temporary and conditional use of abandoned lots for neighborhood gardens and/or urban farms?	no	no	no	no	no	n/a	no	no	
26	Does the municipality sponsor or work with an area community land trust in setting aside land for community? or nonprofit gardens? or gardens where low-income residents can grow produce for sale?	no	no	no	no	no	n/a	no	no	
27	Does the zoning code have language that supports residential "farm" animals; chickens, goats, roosters? (look for re-defining domestic animals)	no	no	no	no	no	n/a	no	no	
28	Are there funding streams available for food related projects, such as Community Development Building Grants?	n/a	n/a	no	no	no	n/a	no	yes	CDBG Public Hearing Announcement: http://nelsoncounty.com/government/2010/02/08/public-hearing-for-cdbg-proposal-february-25-2010/
29	Are there regulations allowing flexibility for food producers to engage in minimal on-site processing?	n/a	yes	no	no	no	n/a	no	no	Nelson County Zoning Ordinance: Art. 4. Agricultural District A-1, § 4-1 – 4-11-3; Art. 9. Industrial District M-2, § 9-1 – 9-5
d. Promote multi-modal transportation options to food sources										
30	Does the locality offer multi-modal transportation in the community?	yes	n/a	no	no	no	n/a	no	no	Nelson County Public School Bus / Nelson County Comprehensive Plan pg. 45-47
31	Does the locality have a policy or programs to provide multimodal transportation options in the community to enable transportation of low-income populations to grocery stores? Does it reference or include transportation for migrant farm workers from camps?	yes	n/a	no	no	no	n/a	no	no	Nelson County Comprehensive Plan- limited bus service mentioned.
32	Does the locality have a program that, alternatively, transports local produce to low-income neighborhoods and migrant farm worker camps? (e.g., trucks, food carts, etc.)	no	n/a	no	no	no	n/a	no	no	
33	Do safe biking and walking paths exist between neighborhoods and food stores and markets?	no	n/a	no	no	no	n/a	no	no	
34	Does the locality have a bus service that connects neighborhoods directly with food stores and markets? Requiring no more than one bus change?	no	n/a	no	no	no	n/a	no	yes	JAUNT Bus Service for elderly population
35	Does the locality have a low-cost taxi or ride-sharing service that connects neighborhoods directly with food stores and markets?	no	n/a	no	no	no	n/a	no	no	
36	Are these transportation services available at multiple times of day and evening?	no	n/a	no	no	no	n/a	no	no	
37	Does the locality have a bike path or sidewalk plan?	yes	no	no	no	no	no	no	no	Nelson County Comp Plan- Chapter 5
e. Reduce community exposure to pesticides and chemicals in foods										
38	Does the locality have a policy or program to reduce pesticide use, with appropriate enforcement?	no	no	no	no	no	no	no	no	

Last updated: 4/28/10									
39	Does the locality have or support a policy or program to ensure appropriate protection of all farm workers from exposure to pesticides? (e.g., training in farm worker language about dangers of pesticides, appropriate application and protection measures, provision of equipment, etc.)	no	n/a	no	no	no	n/a	no	no
40	Does a program or regulation exist that ensures proper communication of sanitation and hygiene practices for farm workers to ensure food safety?	no	n/a	no	no	no	n/a	no	no
41	Does a policy or program exist to encourage transition to low-spray, sustainable, or organic agricultural methods, to reduce human and environmental exposure to potentially harmful chemicals?	no	no	no	no	no	no	no	no
42	Does a policy or program exist to encourage transition to sustainable or organic agricultural methods, to provide increased carbon sequestration?	no	no	no	no	no	no	no	no
43	Is there a policy or program that offers incentives to farmers to switch to more sustainable growing methods?	no	no	no	no	no	no	no	no
2. ECONOMIC DEVELOPMENT									
a. Support local food production									
44	Does the locality offer working farmland tax incentives, such as agriculture/forestry districts?	yes	no	no	no	no	n/a	no	no
	Nelson County Comprehensive Plan- Ag/ Forest districts are explained, but not direct taxing structure. Tax rate for land pg.18, appendix								
45	Is there a local government policy or preference for local agencies to purchase low-spray, sustainably grown, or organic food?	no	n/a	no	no	no	no	no	no
46	Does the locality have economic development goals to support regional food production?	yes	n/a	yes	no	no	n/a	no	yes
	Local Food Hub - http://www.localfoodhub.org/ ; Supporters Page: http://www.localfoodhub.org/content/view/full/1374/202/ ; http://nelsoncounty.com/business/economic-development-authority-strategic-plan/								
47	Is there a local government policy recommendation for purchase of local food when available?	no	n/a	no	no	no	no	no	no
48	Is there a support system to supply existing farmers with steady and seasonal farm labor?	no	n/a	no	no	no	no	no	no
49	Are there local government or other programs to inspire and train new farmers, including assistance to immigrants who may come from farming families?	no	n/a	no	no	no	n/a	no	no
50	Are there economic development programs or incentives or other tools for retailers to favor purchasing local food?	no	n/a	no	no	no	n/a	no	yes
	Local Food Hub - http://www.localfoodhub.org/								
b. Support development of local processing infrastructure									
51	Are the financial or other programs to support or incubate food-related businesses?	no	n/a	no	no	no	n/a	no	no
52	Is there a USDA-inspected community cannery, kitchen, or other processing facility open to local farmers, food entrepreneurs, and the public?	no	n/a	no	no	no	no	no	yes
	Community Center Kitchen in Lovington								
c. Support development of local distribution infrastructure									
53	Does the locality have a policy to allow local farmers' markets or tailgate markets or farmstands?	no	yes	no	no	no	no	no	yes
	Nelson County Zoning Ordinance, Art. 4. Agricultural District A-1, 4-1-5b (retail store, neighborhood); Nelson County Zoning Ordinance, Art. 8B. Service Enterprise District SE 1, 8B1-2a (convenience store), 8B-1-5a (wayside stand), 8B-1-8a (farm winery permanent remote retail establishment); Nelson County Farmers Market - http://www.nelsonfarmersmarket.com/								
54	Does the locality provide institutional support for local farmers' markets or tailgate markets?	n/a	no	no	no	no	no	no	yes
	Nelson County Farmers Market - http://www.nelsonfarmersmarket.com/index.shtml								
55	Is there economic development support for businesses that provide regional distribution of regional food, such as a Food Hub?	no*	n/a	no	no	no	no	no	yes
	Local Food Hub - http://www.localfoodhub.org/								
d. Support development of new businesses using locally sourced products & heritage foods									

		Last updated: 4/28/10							
56	Does the locality provide tax incentives, leasing agreements, or other incentives to support development of businesses using locally produced food?	no	n/a	no	no	no	n/a	no	no
57	Does the locality have a policy or program to support the identification and development of local heritage seeds, crops, foods, and heritage food products?	no	n/a	no	no	no	n/a	no	no
58	Does the locality have a policy or program to support stores that offer fresh local produce, meats, dairy and eggs to low-income populations, including farm workers?	no	no	no	no	no	n/a	no	no
e. Support increased Security of Food Supply									
59	Does the locality have an emergency preparedness plan that includes contingency plans for short-term interruption of food deliveries?	no	no	no	no	no	no	no	no
3. ENVIRONMENTAL BENEFITS									
a. Reduce community carbon footprint and reduce nonpoint source stream pollution									
60	Does the locality have a policy or goal to reduce its community environmental "foodprint"?	no	no	no	no	no	no	no	no
b. Reduce nonpoint source stream pollution from agriculture									
61	Does the locality have a policy or goal to reduce nonpoint source pollution from agricultural operations?	no	no	no	no	no	n/a	no	no
62	Does the locality provide support for the establishment of riparian buffers along farmland streambanks, to reduce nonpoint source pollution?	yes	no	no	no	no	n/a	no	Nelson County Comprehensive Plan- pg6 appendix
63	Does the locality have a policy or goal to fence out all livestock from streamways?	no	no	no	no	no	n/a	no	no
64	Does the locality have a policy or goal or participate in a program to manage excess animal manure?	no	no	no	no	no	n/a	no	no
c. Reduce Food Waste									
65	Is there a policy or program to encourage foraging from unused home fruit and other gardens?	no	no	no	no	no	no	no	no
66	Does the locality have a map for local food foraging?	no	no	no	no	no	no	no	no
67	Is there a policy, program or opportunity for gleaning from local farms and restaurants?	no	no	no	no	no	no	no	no
68	Does the locality offer demonstration programs to encourage composting?	no	no	no	no	no	no	no	no
69	Does the locality offer a central site for composting home food and yard materials?	no	no	no	no	no	no	no	no
d. Reduce Pesticides and Herbicides in Groundwater and Surface Waters									
See 1.E.									
4. SOCIAL EQUITY									
a. Increase transportation system access to markets that sell fresh and healthful foods by underserved communities									
70	Does the locality have a policy to provide access to quality food for all citizens, especially those with greater need?	no	no	no	no	no	yes	no	yes
71	Does the locality have a bus service, low-cost taxi or ride-sharing service that connects low-income neighborhoods directly with food stores and markets (requiring no more than one bus change) - for rural as well as urban areas?	no	n/a	no	no	no	n/a	no	no
72	Are these transportation services available at multiple times of day and evening, in rural as well as urban areas?	no	n/a	no	no	no	n/a	no	no
73	Has the locality done any infrastructure, transportation or other studies to identify issues of low-income neighborhoods gaining access to quality food, in rural as well as urban areas?	no	n/a	no	no	no	n/a	no	yes
74	Do safe biking and walking paths exist between low-income neighborhoods and food stores and markets, in rural as well as urban areas?	no	no	no	no	no	n/a	no	no

75	Are farmer's markets geographically accessible by low income neighborhoods, in rural as well as urban areas?	no	n/a	no	no	no	n/a	no	no	Last updated: 4/28/10
b. Support location of grocers providing healthy local, foods in diverse and underserved locations										
76	Does the locality have an expedited development and/or permitting process for groceries that will provide healthy, local foods in underserved locations - in rural as well as urban areas?	no	no	no	no	no	n/a	no	no	
77	Does the locality recognize through policy or programs the need for low income, immigrant populations, and migrant farm workers, to have access to grocers that provide local, fresh foods - in rural as well as urban areas?	no	no	no	no	no	n/a	no	no	
78	Are tax credits available to developers for opening a grocery store in certain areas?	no	no	no	no	no	n/a	no	no	
79	Are there any regulatory incentives, such as relaxed zoning requirements, that can facilitate new stores in underserved areas?	no	no	no	no	no	n/a	no	no	
80	Does the locality offer any predevelopment assistance to developers to expedite the review process?	no	no	no	no	no	n/a	no	no	
c. Increase availability of fresh and healthful foods for underserved communities										
81	Does the locality support the purchase/ use of Electronic Benefits Transfer (EBT) cards to provide low-income access to farmer's markets?	no	n/a	no	no	no	n/a	no	no	
82	Does the locality support the policy of \$2 or \$3 for every EBT dollar, when the EBT is used at grocery stores or market venues for fresh, local food?	no	n/a	no	no	no	n/a	no	no	
83	Do farmer's markets and/or grocery stores accommodate WIC coupons, Senior Nutrition coupons, or EBT machines?	no	n/a	no	no	no	n/a	no	yes	Nelly May Bucks Program for senior citizens at Nellysford farmers market
84	Do farmer's markets enable \$2 or \$3 healthy food credit for every EBT dollar?	no	n/a	no	no	no	n/a	no	no	
85	Are markets and stores accessible at multiple times and days to accommodate varying work schedules?	n/a	n/a	no	no	no	n/a	no	no	
86	Does the locality support, or are there programs for mobile farms stands and mobile food carts?	no	no	no	no	no	n/a	no	no	
87	Do local faith, nonprofit organizations, and educational institutions (public and private) have policies to buy local food for events when available?	no	n/a	no	no	no	no	no	no	
d. Support an effective emergency food infrastructure										
88	Does the locality have a policy that its citizens have a "right to food security"? (cf: Belo Horizonte, Brazil)	no	no	no	no	no	no	no	no	
89	Does the locality support the provision of a central directory of all emergency food providers?	no	n/a	no	no	no	no	no	no	
90	Does the locality have a system for directing / referring people in need of food to the places that can help?	n/a	n/a	no	no	no	no	no	no	
91	Does the locality support coordination and cooperation among emergency food providers?	no	n/a	no	no	no	no	no	no	
92	Does the locality support a method, structure or storage facility for donations of fresh foods to emergency food providers?	no	n/a	no	no	no	no	no	no	
e. Support equitable working conditions for farm labor										
93	Does the locality support a living wage policy for all those who work, including migrant farm labor?	no	n/a	no	no	no	no	no	no	
94	Does the locality support access to fresh, healthful food by the farm laborers who are helping to produce the food?	no	n/a	no	no	no	n/a	no	no	
95	Does the locality provide or ensure that training for farm workers is provided in a comfortable training environment, and that the training is adequate and in their native language, and that someone is available to answer farm worker questions in their own language?	no	n/a	no	no	no	n/a	no	no	
96	Does the locality provide or ensure that adequate protection against pesticides is provided to farm workers?	no	n/a	no	no	no	n/a	no	no	

											Last updated: 4/28/10
97	Does the locality have a program or support a program to encourage and enable transitional farm labor to become engaged in, or participate in, or become integrated into community events - such as through volunteering for county fairs, agricultural events?	no	n/a	no	no	no	n/a	no	no		
98	Does the locality have a clear contact for migrant farm workers to contact, to participate in any aspect of the community?	no	n/a	no	no	no	n/a	no	no		
99	Does the locality have a map of where farm worker camps are, to facilitate understanding and planning for their needs?	no	no	no	no	no	n/a	no	no		
100	Are housing options available for migrant workers?	no	no	no	no	no	n/a	no	no		
f. Promote community involvement and ownership in local food system											
101	Are community members involved in the organization of markets or other food opportunities?	no	n/a	no	no	no	no	no	no		
102	Are culturally appropriate, fresh food options available for immigrant and ethnic populations in stores?	no	n/a	no	no	no	n/a	no	no		
103	Is there support for diverse, local, traditional - and fresh - food practices?	no	n/a	no	no	no	no	no	no		
104	Does the locality support or have a program to incorporate the participation of local migrant workers into local food farmers' markets and farm stands, to integrate and protect workers while they're in the community, as isolation is a major factor in migrant worker life?	no	n/a	no	no	no	n/a	no	no		
105	Does the locality support or have a program to support community gardens and other agricultural opportunities for low income, immigrant and farm labor populations?	no	no	no	no	no	no	no	no		
5. LAND CONSERVATION / ACCESS TO LAND FOR FOOD PRODUCTION											
106	Does the locality have a policy to support land conservation for food production?	yes	yes	no	no	no	n/a	no	no	Nelson County Zoning Ordinance, Art. 3. Conservation District C-1, § 3-1 – 3-8 & Art. 4. Agricultural District A-1, § 4-1 – 4-11-3	
107	Does the locality encourage or support land conservation easements for food production?	no	yes	no	no	no	n/a	no	no	Nelson County Zoning Ordinance, Art. 21. Cluster Housing Development, § 21-6/ Nelson County Comp Plan Appendix pg 6	
108	Does the locality clearly allow the use of public space or land for nonprofit community food gardens?	no	no	no	no	no	no	no	no		
109	Are there creative leasing or financing models to reduce start-up farming debt?	no	n/a	no	no	no	n/a	no	no		
110	Does the locality have a map of its prime agricultural lands for conservation?	yes	no	no	no	no	n/a	no	no	Nelson County Comp Plan- maps of land use	
111	Does the locality have a map of prime agricultural lands that it wishes to conserve for food production, agri-tourism, heritage tourism, or other purposes supporting local food production?	no	no	no	no	no	n/a	no	no		
112	Does the locality limit development potential in prime agricultural land through purchase of development rights, transfer of development rights, establishment of agricultural districts, or through other means?	no	no	no	no	no	n/a	no	no		
113	Does the locality have a green infrastructure plan that incorporates consideration for food production into the plan?	no	no	no	no	no	n/a	no	no		

Nelson County Supplemental Audit Notes:

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1. PUBLIC HEALTH**1a: Reduce and Prevent Community Obesity and Chronic Illness**

Q1: Mention of goal for improving public health:

- a. Nelson County Public School Wellness Policy, Policy Statement: “The Nelson County School Board recognizes the link between student health and learning and desires to provide a comprehensive program promoting healthy eating and physical activity in division students.”

Q2: Goal to reduce obesity:

- a. Nelson County Public School Wellness Policy, Section D: “Nutrition guidelines have been selected by the division for all foods available on every school campus during the school day. The objectives of the guidelines are to promote student health and reduce childhood obesity.”

Q3: Overall wellness plan:

- a. Nelson County Public School Wellness Policy
- b. Nelson County Comprehensive Plan, pg.9 “Goal: Encourage access to a full range of quality health care facilities and programs for all county residents. Principal: Develop a specific Community Health Improvement Strategy.”

Q4: Farm to School programs:

Not mentioned

Q5: School purchasing local:

Not mentioned

Q6: Reduce available junk food:

- a. Nelson County Public School Wellness Policy, Section 2-A.4-6:
 - 4) All snack vending machines shall provide only single serving snacks that meet at least two, with at least 50% of the items meeting three of the following:
 - (a) 300 or fewer calories

- (b) 6 grams of fat or less
 - (c) 1 or more grams of fiber
 - (d) At least 10% of RDA of calcium, iron, vitamin A or vitamin C
- 5) All individual beverage vending machines in public areas and accessible to students, with the exception of those vending only water, shall include all of the following:
- (a) Water
 - (b) 100% fruit juice
 - (c) Non-carbonated drinks with less than 150 calories per container
 - (d) No more than 1/3rd of the choices will be carbonated drinks
- 6) Beverage vending machines may also include:
- (a) Non-fat, 1% low-fat, plain or flavored milk or yogurt in 16 ounces or less servings
 - (b) Other non-carbonated drinks
- 6) Beverage vending machines may also include:
- (a) Non-fat, 1% low-fat, plain or flavored milk or yogurt in 16 ounces or less servings
 - (b) Other non-carbonated drinks

Q7. Educate cafeteria workers:

Not mentioned

Q8. Food based lesson plans:

a. Nelson County Public School Wellness Policy, Section 2-A.7: "The School Nutrition Program shall support classroom activities for all elementary students that include hands-on applications of good nutrition practices to promote health and reduce obesity."

Q9. School gardens:

Not mentioned

Q10. Joint use agreement:

Not mentioned

Q11. Chain restaurants/calories on menus:

Not mentioned

Q12. Tax on/discourage low nutritional value items:

Not mentioned

Q13. Discourage SNAP for sugary foods and beverages:

Not mentioned

1b. Engage public by increasing awareness of healthy and local food options

Q14. Increase awareness of healthy lifestyle:

- a. Nelson County Public School Wellness Policy, Section 2-D.a: “Nelson County School District shall collaborate with community health liaisons and resources to promote health and wellness for students, families, staff and community.”
- b. Community Obesity Task Force - <http://www.childhoodobesitytaskforce.org/> - organized by the Thomas Jefferson Health District has a mission to “create a supportive community that fosters healthy weight and overall fitness for children and their families.” “Since 1999, the Thomas Jefferson Health District has spearheaded the Childhood Obesity Task Force (COTF) serving Charlottesville, Albemarle, Fluvanna, Greene, Louisa, and Nelson counties, Virginia, to address the prevention and treatment of overweight among children.”

Q15. Definition for local food:

Not mentioned

Q16. Support production and distribution of local food:

Not mentioned

Q17. Guide to local food support:

- a. PEC Buy Fresh, Buy Local - <http://www.buylocalvirginia.org>
- b. Locally Grown Nelson - <http://www.nelson.locallygrown.net/growers>

Q18. Purchasing preference for local:

Not mentioned

Q19. Media campaign to support healthy eating:

Not mentioned

Q20. Support Food Policy Council:

Not mentioned

1c. Flexible Policies and Zoning for creative and adaptive uses

Q21. Code allowance for open space or community gardens:

- a. Nelson County Zoning Ordinance, Art. 3. Conservation District C-1, § 3-1 – 3-8: “This district is established for the specific purpose of facilitating existing and future farming operations, conserving water and other natural resources, reducing soil erosion, protecting watersheds, reducing hazards from flood and fire and preserving wildlife areas of the County.”
- b. Nelson County Zoning Ordinance, Art. 4. Agricultural District A-1, § 4-1 – 4-11-3: “This district is designed to accommodate farming, forestry, and limited residential use. While it is recognized that certain desirable rural areas may logically be expected to

develop residentially, it is the intent, however, to discourage the random scattering of residential, commercial, or industrial uses in this district.”

- c. Nelson County Comprehensive Plan, pg. 38 “While rural character is fundamentally difficult to define, it is important to describe the rural features which are important to be protected- The farms, orchards, and forest land; The mountain and scenic vistas, The river and stream corridors, The barns, outbuildings, and farmhouses, The historic properties and sites, The scenic roadways passing through rural areas.”

Q22. Promote accessibility to community gardens for all neighborhoods:

Not mentioned

Q23. Land protections for farmers’ markets:

- a. Nelson County Comprehensive Plan, pg. 32. Mixed Use Neighborhood Model. “For public use a library, space for farmer’s market, and space for recreation are appropriate.”

Q24. Pocket parks to community gardens:

Not mentioned

Q25. Allow abandoned lots for gardens or farms:

Not mentioned

Q26. Work with community land trust, non-profits, or allow low-income to sell produce:

Not mentioned

Q27. Code allow for residential zones to keep “farm” animals:

Not mentioned

Q28. Funding for food projects:

- a. Nelson County is currently applying for CDBG for Blue Ridge Medical Center Expansion, it is unclear if this includes health or food related projects.
- b. Nelson County Government Website (<http://nelsoncounty.com/government/2010/02/08/public-hearing-for-cdbg-proposal-february-25-2010/>): The County of Nelson will hold a public hearing on March 9, 2010 at 7:00 p.m. at the County Courthouse in Lovingston, Virginia to solicit public input on the proposed Community Development Block Grant (CDBG) proposal to be submitted to the Virginia Department of Housing and Community Development for the Blue Ridge Medical Center Expansion Project. Residents of the project area are encouraged to attend. The Blue Ridge Medical Center Expansion Project will include the following activities:
 - 1. The overall scope of the project is a major expansion of the Blue Ridge Medical Center and its program(s) services.
 - 2. CDBG funding will be used for the renovation of the existing Blue Ridge

Medical Center to accommodate provision of dental services and to house BRMC's outreach program services.

Q29. Minimal on-site processing:

- a. Nelson County Zoning Ordinance Art. 9. Industrial District M-2, § 9-1 – 9-5: Agricultural districts permit "agriculture" defined as "*Agricultural*: The tilling of the soil, the raising of crops, horticulture, and forestry, including the keeping of animals and fowl, and including any agricultural industry or business, such as fruit packing plants, dairies, or similar use associated with an active farming operation, unless otherwise specifically provided for in this ordinance." This definition suggests minimal processing for associated food products. Agricultural districts allow "farm wineries" by right and "dairy plants" by special permit. Abattoirs and other meat processing not permitted in agricultural districts.
- b. Nelson County Zoning Ordinance Art. 9. Industrial District M-2, § 9-1 – 9-5: "Abattoir" allowed with special use permit in industrial districts (otherwise not listed); manufacture, compounding, processing, packaging or treatment of bakery goods, dairy products, and food products permitted by right in industrial districts; food or meat packing or processing plant require conditional use permit.

1d. Promote multi-modal transportation options to food sources

Q30. Offer multi-modal transportation:

- a. Nelson County Comprehensive Plan- has plans for improvement of bicycle paths and pedestrian lanes. (pgs. 45-47)

Q31. Transportation for low income or migrant workers to grocery stores:

Not mentioned

Q32. Transport food to low income and migrant neighborhoods:

Not mentioned

Q33. Safe biking and walking paths to food sources:

- a. Nelson County Comprehensive Plan pg. 46 " A crossing of route 29 in Lovington's downtown and developments on the west side of 29 is necessary for safety and is desired especially with a large grocery store across the street."

Q34. Bus service connects neighborhoods and food stores, does it require more than 1 transfer:

- a. Nelson County Comprehensive Plan- limited bus service available
- b. JAUNT service available weekly for senior citizens

Q35. Provide low-cost taxi or ride share to food sources?

Not mentioned

Q36. Is transportation available during days and nights?

Not mentioned

Q37. Bike path or sidewalk plan:

- a. Nelson County Comprehensive Plan- Chapter 5

1e. Reduce community exposure to pesticides and chemicals in foods

Q38. Reduce pesticide use, appropriate enforcement:

Not mentioned

Q39. Protect farm workers from exposure:

Not mentioned

Q40. Protect food safety through proper training of farm workers:

Not mentioned

Q41. Encourage transition to low spray or organic to reduce chemical exposure:

Not mentioned

Q42. Encourage transition to organic or sustainable for increased carbon sequestration:

Not mentioned

Q43. Offer incentives to transition to sustainable or organic:

Not mentioned

1. ECONOMIC DEVELOPMENT

2a. Support local food production

Q44. Working farmland tax incentives:

- a. Nelson County Comp Plan has Ag/ Forrestral Districts. Tax structure for these lands unknown. Tax Structure for land value, "real Property value is \$0.55 for every \$100 of assessed value." Pg. 17 appendix

Q45. Purchasing preference for low-spray, organic or sustainable:

Not mentioned

Q46. Economic development support for food production:

- a. Local Food Hub Web Site - <http://www.localfoodhub.org/>.
"Nelson County Industrial Development Authority" listed on "Supporters" Page - <http://www.locallectual.com/content/view/1374/202/> under "Visionary: \$10,000 +"
- b. Nelson County Economic Development Authority, 2003-04: Strategic Plan – <http://nelsoncounty.com/business/economic-development-authority-strategic-plan/>:

“Goals of Nelson County EDA (Clarified via Priorities, Objectives, and Strategies within Each Goal)

Goal 1. Business and Industry Development

- Priorities for this goal:

1. Business retention and expansion”

Since food production businesses are currently located within Nelson County, its policy is to provide economic development support for food production business retention and expansion.

Q47. Purchase of local food when available:

Not mentioned

Q48. Support system for seasonal labor for farms:

Not mentioned

Q49. Program to inspire and train new farmers, including immigrant assistance:

Not mentioned

Q50. Incentives for retailers to purchase local food:

a. Local Food Hub - <http://www.localfoodhub.org/>:

“The Local Food Hub is a non-profit service organization located in the Piedmont of Central Virginia. Our mission is to strengthen and secure the future of a healthy regional food supply by providing small local farmers with concrete services that support and advance their economic vitality and promote stewardship of the land. Our goal is to increase the amount of fresh, locally grown food available to our community. We aim to expand the socio-economic profile of consumers of locally produced foods to include currently under-served populations. We are a local food wholesale distribution hub with an outfitted warehouse located in Ivy, Virginia that moves local products to grocery stores, schools, senior facilities and restaurants.”

2b. Support development of local processing infrastructure

Q51. Programs to support or incubate food related businesses:

Not mentioned

Q52. USDA kitchen or other processing facility available:

a. Lovington Community Center has a community kitchen - we were unable to find information regarding the use of the kitchen or if it is USDA inspected.

2c. Support development of local distribution infrastructure

Q53. Allow for farmers markets, tailgate markets, or farmstands:

- a. Nelson County Zoning Ordinance, Art. 4. Agricultural District A-1, 4-1-5b: retail store, neighborhood permitted by conditional use.
- b. Nelson County Zoning Ordinance, Art. 8B. Service Enterprise District SE-1, 8B1-2a (convenience store), 8B-1-5a (wayside stand), 8B-1-8a (farm winery permanent remote retail establishment) – permitted with special use permit
- c. Nelson County Zoning Ordinance definition: *Wayside stand, roadside stand, wayside market*: Any structure or land used for the sale of agriculture or horticultural produce; livestock, or merchandise produced by the owner or his family on their farm
- d. Nelson County Farmers Market - <http://www.nelsonfarmersmarket.com/index.shtml>

There are Farmer's Markets operated by the Nelson Farmer's Market Co-operative in Nellysford (Saturdays) and Lovington (Wednesdays). "Founded in 1997, the Nelson Farmers' Market is considered one of the premier producers-only markets (*everything sold is grown, prepared or crafted by its members*), in the region. Set in the heart of the Rockfish Valley, the market operates on a grassy field under long white tents. Local farmers bring their seasonal produce, berries, peaches, apples, cut flowers, free range eggs, grass-fed beef, pork, lamb and poultry. You can also find cheese, mushrooms, honey and fresh-cut herbs. Plants for sale include trees, shrubs, heritage tomatoes, perennials, herbs, bedding plants, chrysanthemums and orchids. Bakers bring a wide variety of loaf breads, fruit pies, cakes, and meat-filled pastries. Crafters offer original jewelry, pottery, baskets, fabric crafts, furniture, photography and art."

Q54. Provide institutional support for farmers' markets and tailgate markets:

- a. Nelson County Farmers Market - <http://www.nelsonfarmersmarket.com/index.shtml>

There are Farmer's Markets operated by the Nelson Farmer's Market Co-operative in Nellysford (Saturdays) and Lovington (Wednesdays).

Q55. Economic support for regional distribution center:

- a. Local Food Hub - <http://www.localfoodhub.org/>: "We are a local food wholesale distribution hub with an outfitted warehouse located in Ivy, Virginia that moves local products to grocery stores, schools, senior facilities and restaurants."

2d. Support development of new businesses using locally sourced products & heritage foods

Q56. Incentives for businesses using locally produced food:

Not mentioned

Q57. Support for identification and development of heritage seeds, food, products, etc:

Not mentioned

Q58. Program that supports stores that provide fresh, local options for low income:
Not mentioned

2e. Support increased Security of Food Supply

Q59. Emergency preparedness plan for disruptions in food supply:
Not mentioned

3. ENVIRONMENTAL BENEFITS

3a. Reduce community carbon footprint and reduce nonpoint source stream pollution

Q60. Goal to reduce foodprint:
Not mentioned

3b. Reduce nonpoint source stream pollution from agriculture

Q61. Reduce nonpoint source pollution from agriculture:
Not mentioned

Q62. Riparian buffers used to reduce nonpoint source pollution:
a. Nelson County Comprehensive Plan, Appendix pg. 6 “protection of local streams, lakes and estuaries. Reduction of stormwater pollutant loads.” Pg.9 appendix “Naturally Vegetated Stream buffers provide the best filtration system for stormwater runoff.”

Q63. Fence livestock from stream banks:
Not mentioned

Q64. Program to manage excess animal manure:
Not mentioned

c. Reduce Food Waste

Q65. Encourage foraging from unused locations:
Not mentioned

Q66. Local map for food foraging:
Not mentioned

Q67. Opportunity for gleaning from farms and restaurants:
Not mentioned

Q68. Demonstration programs for composting:
Not mentioned

Q69. Offer central site for composting from homes and yards:

Not mentioned

2. SOCIAL EQUITY

4a. Increase transportation system access to markets that sell fresh and healthful foods by underserved communities

Q70. Quality food for all citizens:

- a. Nelson County Public School Wellness Policy, Section 2-A, no. 2: "School Nutrition policies and guidelines for qualification for reimbursable meals shall not be more restrictive than federal and state regulations require."
- b. Nelson County Pantry - <http://nelsoncountypantry.wordpress.com/>

Q71. Bus service, taxi or ride share in rural as well as urban areas:

Not mentioned

Q72. Transportation available during day and evening in rural as well as urban areas:

Not mentioned

Q73. Any studies to assess needs of low-income neighborhoods to gain access to fresh foods:

- a. Lovington Safety Study, compiled June 30, 2005 by the Thomas Jefferson Planning District Commission with two main goals:
 - 1. Maintain and enhance the historic, small town pedestrian-oriented character of Lovington and;
 - 2. Provide a safe and efficient connection between the two sides of Route 29 to alleviate the safety problems for drivers, pedestrians, and bicyclists.
- b. Nellysford Community Plan, compile December 2006 by the Thomas Jefferson Planning District Commission includes transportation analysis including pedestrian access to shopping centers and Nellysford farmers market.

Q74. Safe biking and walking paths to food sources in rural and urban areas:

Not mentioned

Q75. Farmers' markets geographically accessible:

Not mentioned

4b. Support location of grocers providing healthy local, foods in diverse and underserved locations

Q76. Expedited development review for food stores in underserved locations:

Not mentioned

Q77. Does locality recognize need for low income, immigrant and migrant populations to have access to fresh, healthful foods:

Not mentioned

Q78: Tax credits for opening food stores in certain locations:

Not mentioned

Q79. Any regulatory incentives, i.e. relaxed zoning requirements, to facilitate food stores:

Not mentioned

Q80: Offer predevelopment assistance to developers for grocery stores:

Not mentioned

4c. Increase availability of fresh and healthful foods for underserved communities

Q81. EBT machines at farmers' markets:

Not mentioned

Q82. Dollar matching, or increased value (\$2 or \$3 for every one spent) opportunities for EBT dollars spent on healthful foods at grocery stores:

Not mentioned

Q83. Food sources accommodate WIC, Senior Nutrition, EBT:

- a. Nelly May Bucks Program organized through Nellysford Farmer's Market for senior citizens: \$2000 worth of vouchers distributed to senior centers for use at farmer's market; program funded through market vendor fees

Q84. Farmers' markets enable \$2 or \$3 healthy food credit for every EBT dollar:

Not mentioned

Q85. Markets and stores accessible at multiple times of day:

Not mentioned

Q86. Mobile farm stands or carts:

Not mentioned

Q87. Faith, nonprofit or institutions have purchasing preferences for local foods:

Not mentioned

4d. Support an effective emergency food infrastructure

Q88. Right to food security:

Not mentioned

Q89. Central directory of emergency food providers:

Not mentioned

Q90. System for referring people in need of food:

Not mentioned

Q91. Support coordination and cooperation between agencies:

Not mentioned

Q92. Opportunity for storage of fresh foods for providers:

Not mentioned

e. Support equitable working conditions for farm labor

Q93. Living wage policy for all who work, including farm labor:

Not mentioned

Q94. Access to fresh, healthful food for those who produce it:

Not mentioned

Q95. Ensure training for farm labor that is comfortable, accessible in native language:

Not mentioned

Q96. Adequate protection from pesticides:

Not mentioned

Q97. Opportunities for transitional farm labor to become engaged in local community:

Not mentioned

Q98. Person available for migrant farm workers to contact regarding community events:

Not mentioned

Q99. Map of farm worker camps:

Not mentioned

Q100. Housing opportunities for migrant workers:

Not mentioned

4f. Promote community involvement and ownership in local food system

Q101. Community involved in organization of food opportunities:

Not mentioned

Q102. Culturally appropriate fresh foods:

Not mentioned

Q103. Support for diverse, local, traditional - and fresh - food practices:

Not mentioned

Q104. Incorporate migrant workers in markets and community events:

Not mentioned

Q105. Opportunities for low income, immigrant, or migrant to participate in gardens or food projects:

Not mentioned

5. LAND CONSERVATION / ACCESS TO LAND FOR FOOD PRODUCTION

Q106. Land conservation for food production:

- a. Nelson County Zoning Ordinance, Art. 3. Conservation District C-1, § 3-1 – 3-8: “This district is established for the specific purpose of facilitating existing and future farming operations, conserving water and other natural resources, reducing soil erosion, protecting watersheds, reducing hazards from flood and fire and preserving wildlife areas of the County.”
- b. Nelson County Zoning Ordinance, Art. 4. Agricultural District A-1, § 4-1 – 4-11-3: “This district is designed to accommodate farming, forestry, and limited residential use. While it is recognized that certain desirable rural areas may logically be expected to develop residentially, it is the intent, however, to discourage the random scattering of residential, commercial, or industrial uses in this district.”
- c. Nelson County Comp plan appendix pg. 5 “form and Ag/ Forrestral District for the purpose of conserving land.”
- d. Nelson County Code, Article V. Agricultural and Forestal Districts Sec. 9-150. Purpose and intent.
 - (a) The policy of the county is to conserve, protect, and to encourage the development and improvement of its agricultural and forestal lands for the production of food and other agricultural or forestal products. It is also the policy of the county to conserve and protect agricultural and forestal lands as valued natural resources which provide essential open spaces for improvement of air quality, watershed protection, wildlife habitat, and aesthetic benefits for residents and visitors.
 - (b) It is the purpose and intent of this chapter to provide a means, in accordance with the comprehensive plan, by which agricultural and forestal lands may be protected and enhanced as a viable segment of state and local economics, and as important economic and environmental resources.

Q107. Conservation easements for food production:

- a. Nelson County Zoning Ordinance, Art. 21. Cluster Housing Development, § 21-1 – 21-7:
“A. The reserved area shall be preserved for agriculture, forestry, recreation or open space, by any of the means stated in this section. The Planning Director shall issue no zoning permit and the subdivision agent shall approve no plat that would violate the terms or the intent of this article.”

Q108. Allow public space or land for food production:

Not mentioned

Q109. Creative leasing or finance models to reduce farmer start-up debt:

Not mentioned

Q110. Map of prime agricultural lands:

- a. Nelson County Comp Plan- Land Use Maps

Q111. Map of prime agricultural lands to conserve for food production, agri-tourism, heritage tourism, or other purposes supporting local food production:

Not mentioned

Q112. Limit development potential through PDR, TDR or other programs:

- a. Nelson county Comprehensive Plan- Limited development in Ag/ forest districts. In use with code of Virginia, s 58.1-3230

Q113. Green infrastructure plan that incorporates consideration for food production:

Not mentioned

NELSON COUNTY INTERVIEW NOTES

Interviewees:

Beth Morris - Food Service Director
 Frances Mitchell - JABA Case Manager
 Fred Boger - Nelson Planning Director
 Connie Brennan - Board of Supervisors
 Jim Saunders - Saunders Bros. Orchard
 Maureen Kelly - Nelson County Economic Development
 Roger Collins- Nelson County Public Schools Division Superintendant
 Gary Scott - Twin Springs Farm

1. Public Health

- School Wellness Policy
 - school wellness policy mandated by latest reauthorization of lunch act
 - Student Health Advisory Board (SHAB) approved wellness policy used a model from Alexandria school system
- Superintendent and school board understand the need for wellness and health, but not a top priority for funding due to other stresses such as accreditation. On Governor scorecard, nutritionally Nelson county schools make the grade.
 - especially support wellness programs that do not require additional money or take time from educational instructional time
- School food program highly regulated at national and state level
- Food purchasing policy (no preference policy)
 - Nelson working with Local Food Hub to increase local purchasing, food hub only offers one delivery day per week.
 - have worked with Saunder's Brothers for fruit in the past - distribution became a challenge at prices comparable to other distributors
 - current distributor - Cavalier Daily (does source some items locally, but not a consistent preference)
 - need to address distribution and cost of purchasing locally (working with Food Hub)
 - supportive of local purchasing if convenient, competitive prices, and consistent availability
 - starting to see changes based on relationships and building contacts
- Food Nutrition
 - need to consider acceptability with students for food served
 - self sustaining program - based on participation so need to make desirable meals
 - have made a difference where possible - whole grains, reduced sodium - example - make own pizza with whole grain pizza

dough, daily 16 item salad bar in high school. Iceberg lettuce has been replaced with darker lettuces.

- production records are sales record - determines what is eaten/served/purchase
- standardized USDA recipes
- Rockfish PTO applied for a Fresh Fruit and Vegetable Grant (still to be determined if received) - target a different grade each month and include nutrition education
- menus sent home with nutrition information included - helps provide education for parents as well as students (use John Bennett from Maryland templates) will eat at school.
- non-competition caluse about serving sodas and junk food in vending machines; cannot be pruchased during school hours. Diet soft drink only are avilable after 330pm, no vending machines in elementary schools. This can be difficult becuse of sponsorships, example of Dole juice allowed to be served becuse it is 100% juice, but Ocean Spray is only 25% juice and cannot be served.
- Cooking/food service staff
 - removed all raw products due to safety/hazard program - no raw meat in the kitchen
 - labor costs include training staff
 - managers and assistant managers complete serve-safe training program (focus on food safety)
 - health department requires someone with Serve Safe certification be on site at all times
 - on-site training - kitchen managers do most daily training
- Food based lesson plans
 - horticulture department at high school has grown some edible crops in the past, but food cannot be served in cafeteria.
 - mismatch in growing season and school year presents challenges for incorporating any food grown on campus to lunch
 - dining services will compost kitchen scraps for special class projects when requested
 - "here to support educational environment"
 - using local food is great PR for Nelson County schools, because it is a farming community and many students may know farers where food comes from.
- Challenges:
 - limited time during lunch period to provide samples of new foods (have done some in the past - to encourage student to try something new and gauge interest)
 - currently deficit in budget - no money for anything that doesn't already fit in program
 - \$2.92 federal subsidized rate for lunch - 49% students on free and

reduced lunch in Nelson Count
lost money due to snow days - no money collected from lunch on those days
Difficulty of overcoming students eating patterns; what they are exposed to at home is generally what they

- Nelson County Schools - students involved in landscape improvements - grew trees for landscaping during construction of addition to high school
- Wellness Policy - mentioned in comprehensive plan, but no solid policy working on trail system - VA Blue Ridge Railroad Trail - to encourage exercise and activity
- Removed Bad Drinks from Schools
- Trying to remove junk food from schools hindered by vendors providing grants to school programs
- Obesity task force in Charlottesville (Ann Mallok)
- Getting meals to seniors is a priority addressed by home delivered meal program.t
- Meals are generally frozen, non local food, but foods that meet individual nutritional needs. Cost of meal based on annual income, an income of less than \$19 thousand per year qualifies someone. Average annual income of Nelson Senior population using JABA resources is around \$13 thousand per year.
- County provides budget to JABA to get meals out to people, also depend on volunteers.
- The Nelson County Food Bank also works with JABA to help those in need of food. Fresh food and extra produce often included in these food bags. The Nelson Food Bank feeds about 600 people annually with their Monday and Tuesday lunch program.

2. Economic Development

- Nelson Public Schools have increased push to buy local over the past four years
 - working with Local Food Hub on distribution challenges
 - more than 1/2 Local Food Hub growers are from Nelson County
 - great public relations for school nutrition program to support local farmers
 - "no downside from buying locally"
 - when food is purchased locally through the Local Food Hub - information including bio. of farmer is sent home with school menus - provides support for farmers and shares nutritional information
- JABA community center kitchen purchases some food locally for senior meals - Judy Berger would know more

- Community Center Kitchen run by Nelson County Community Development Foundation in cooperation with JABA
- Nelson has unwritten policy to encourage agricultural accessory uses, which are allowed by right within zoning ordinance (Saunders Bros. market buildings constructed as by right within ag. district), but buildings still need building permits and inspections
- Markets allowed by special use permits for safety reason (traffic access)
- Small ag. - only growing commercial sector within the county
- State - Right to Farm Act - localities can not put up barriers to agricultural uses
- State adopted Nelson view for liberal interpretation for vineyards and breweries uses on agricultural lands
 - vineyards and breweries considered "agricultural enterprise" as long as growing some product on site - allows more lenient zoning
- State Law - can not regulate events on agricultural land?
- City Council has dinner at locally owned restaurants to support local economy, but no policy for local purchasing
- Support of growing and processing food in Nelson for food security
- Document activity - organic farms, CSAs
- Nellysford Bucks - farmer's market
- Regulations can be detrimental to expansion of farm/agricultural operations - for example, moving a farm market building requires zoning permits, building permits, work with Virginia Department of Transportation, and erosion and sediment control permits through the Soil and Water Conservation District - all these regulations and associated fees can be cost prohibitive for small producers or startup agricultural businesses
- Nelson County Economic Development Office is especially helpful for marketing tips and advice
 - Agritourism promotion in county is excellent - brochures, maps, websites - all very beneficial to agribusiness
 - Increasing tourism more important than economic development business planning with individuals
- Increasing road signage would be helpful - tedious process with VDOT, zoning, and county regulations - Signage is very important for marketing
- 4H and FFA programs very active in the county
 - can help encourage future labor force and agricultural business owners
 - emphasis on livestock, forestry, and horticulture (not food crops)
- Maureen Kelly's job is to provide \$7 million a year in tourism revenue, by retaining only, not luring new businesses. This money comes from tax revenues from lodging, dining, and sales taxes. Tax payers pay her salary, it's her job to keep them happy.
- It is important to keep more farmers in business. Nelson now has 10

- wineries, 3 breweries and 1 cidery and distillery on the way.
- Nelson started "the spirit of red white and brew" to promote local breweries combining forces with albermarle county.
- Spread to Brew Ridge Trail Festival, (august 21st of this year) and the string summit of bluegrass music called The Festie happening this fall in october at Devils Backbone.
- working on combining virginia artisians into a Virginia Craft Brewers Guild. The Artisian Trail will be like the crooked road music trail and rount the mount having crafts, artisians, music, and food destinations.
- Now Nelson has three farmers markets
- Buy fresh buy local helps show that for every \$1 spent in community, county recycles 6 times.
- Idea that "Money does grow on trees" approcah to agri-tourism.
- Broadband infrastructure so important to helping farmers access marketing, information, and customers.
- People communte out, 65% drive at least 32 miles to wrok, becuse Nelson residents don't want those jobs in the county. They want to commute and come home to rural lands.

3. Environmental Benefits

- Advocate for food composting in schools associated with school gardens
- Biosolids controversial - regulated at state level
- Inorganic pesticides no regulated - impact of Chesapeake Bay Act?
- Pesticide application regulated at state and national level - DEQ & EPA
- No livestock/fencing regulations at local level
- Need to establish balance between regulations and associated financial obligations with implementation
- Need financial supports for meeting environmental regulations - opportunity for county to support healthy environment

4. Social Equity

- No summer feeding program through schools due to transportation costs
- no supplemental programs (i.e. backpack program) through schools for low income students
- Senior Citizen access to food
 - lunch available at Lovington community center on Mondays and Tuesday for seniors
 - JABA - Home Delivered Meals Program
 - volunteers deliver frozen meals from community centers (most participants are homebound) - 10 meals delivered at a time with bread, milk, and healthy snacks
 - no fee for meals if income is under \$19,000 - average income for JABA seniors is \$13,000

- County provides some money to senior centers for food and transportation
- JAUNT buses - transportation for seniors to senior centers - provides transportation throughout the county
- Hunger needs are being met - no malnourishment of seniors, but "everyone could eat better" - need more fruits and vegetables
- VDOT responsible for crosswalk across 29N - would increase walking access to Food Lion
 - majority of residents use personal vehicles for transportation - JAUNT and neighbors help each other
 - slowly changing with increase in younger population - need to increase pedestrian amenities and make more walkable
 - E911 Coordinator - Ray Ricardo - identified homebound and isolated individuals
 - Volunteer coalition through JABA for health system access; potential to link to food access, nothing in place access Meals on Wheels
 - Transportation within the county is a challenge
 - Saunders Brothers hires guest workers from Mexico through program
 - H2A guest worker program - regulated by US Department of Labor
 - workers hired from May through November, then return to home country
 - wage rates set by federal H2A program - currently just over \$8/hour
 - Nelson County does not have any programs specifically for H2A or farm workers
 - Saunders Bros. provides housing and weekly transportation to the bank and grocery store
 - Some workers purchase personal vehicles for use around town
 - Can get transportation to the doctor (Blue Ridge Medical Center) through coordination with the county (often inefficient and easier for business to provide transportation)
 - Needs are currently being met by private business employers
 - Nelly Maye Bucks at Nellysford Farmers Market
 - \$2,000 of vouchers distributed to senior centers in Nelson
 - money came from contributions from vendors
 - Farmers market board of directors organized
 - will be in place in 2010 as well - \$2000 will be divided by 3 senior centers
 - Nelson county is #1 for ESL teachers in state to help educate migrant worker populations.

5. Land Conservation / Access to Land for Food Production

- 80% county is zoned agricultural
- County does have prime agricultural lands map, but is not used for land use decision making

- Purchase of development rights allowed, but not used
- Cluster development included in zoning ordinance - could encourage gardens and food production in subdivisions by conserving open space - currently no examples in the county
- Property tax rate is currently 55 cents
- Garden project at Tye River Elementary School (April), \$100 provided by Farm Bureau Women's Group, Lion's Club will provide labor to support
- Advocate for school gardens and food composting
- Potential to link in Master Gardners and Garden Club members
- Land use taxation program is most beneficial agriculture policy in Nelson - without the reduced agricultural tax rate, the business would not be feasible at a residential or business rate - supports many agricultural operations in the county

Priorities:

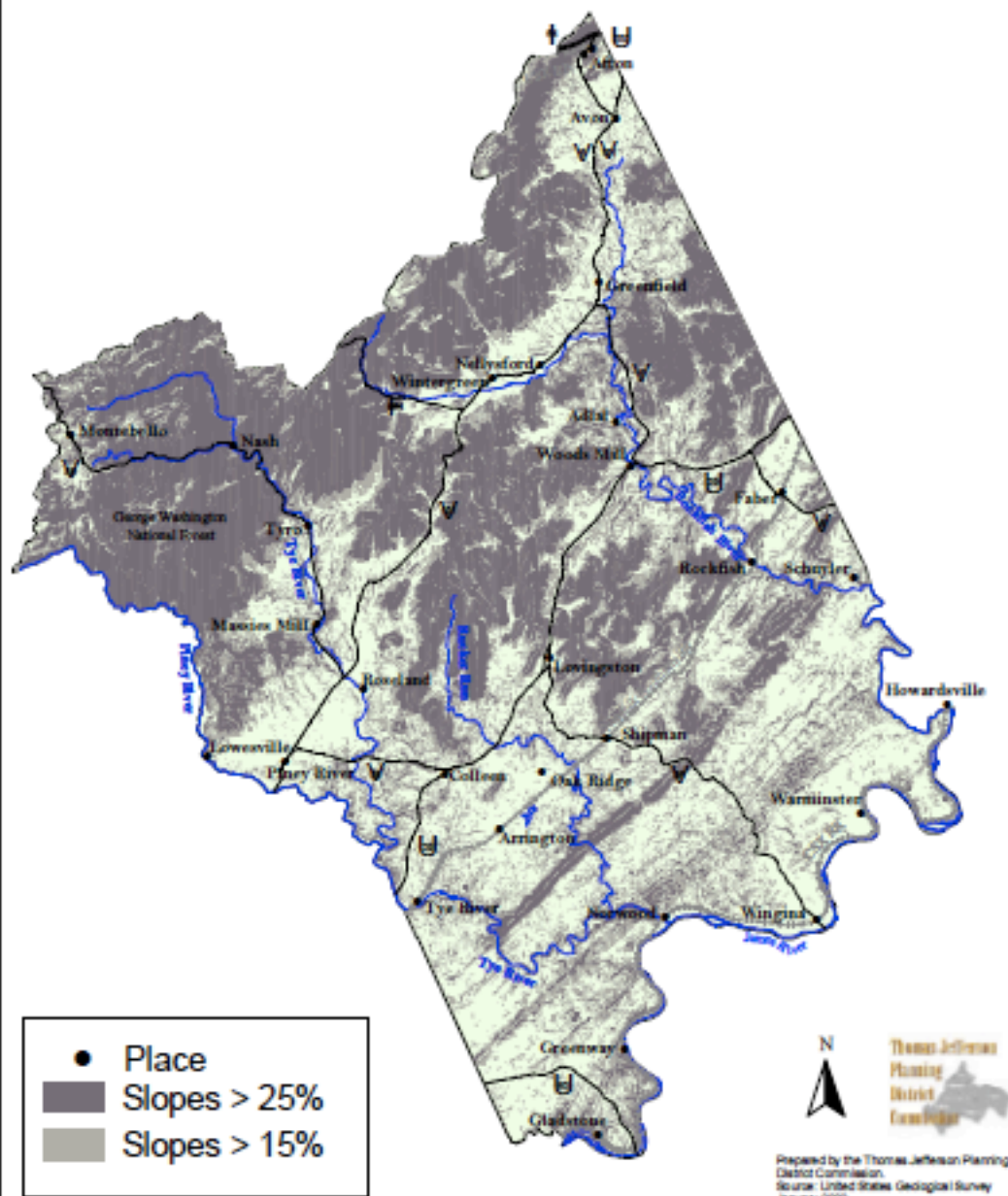
- Nutrition Education (in schools)
 - help educate on benefits of nutrition education in schools
 - would like to collaborate nutrition classes with food service
 - no formal class component that address nutrition for students (double check this!) - nutrition class elective offered at high school
 - school food program currently spends time defending and correcting misunderstanding rather than educating about nutrition
 - County is part of Martha Jefferson Health System - opportunities there?
- Child Obesity in Nelson
 - tie into nutrition education
- Support Community with local purchasing when possible
- Plant unused land in communities for growing vegetables
 - Charlottesville example - historically used idle land next to railroad tracks for growing vegetables
 - encourage community gardens - empowerment for seniors and provide healthy/fresh produce
- Ensure access to grocery stores in very rural areas - county needs some growth and development
 - example - Wingina residents drive 30 miles to and from closest grocery store
 - need more grocery stores in residential areas
- Encourage Agricultural Operations
 - Try to do this without changing codes. Rural areas tend to not support changes to property rights.
- Conservation Easements (Restrictions not supported by large property owners)
- Transportation Alternatives for food access

- Community Gardens (Massey Saunders exploring launch of commercial operation)
- School Children growing food
- Schools purchasing local food (potential to impact families)
- More opportunities for organic agriculture - marketing to growers of opportunities to grow food within Nelson
- All restaurants to use locally grown food, tourism benefit
- Address cost prohibitive environmental regulations
 - want to be environmentally "friendly" but regulations can be daunting - for example - \$15,000 in erosion and sediment control studies for moving farm market
 - financial support from county to make environment a priority?
- Increase signage for agricultural businesses
 - road signage is a very important marketing tool
 - currently many regulations and parties involved - VDOT, zoning department, county supervisors
- Encourage purchasing of local produce
 - keep production in the county
 - connect growers with purchasers - grocery stores, restaurants, resale
 - expand Nelson Grown program
- Advance Nelson County Infrastructure
 - Middle mile open access project for broadband
 - Will help farmers and artisans communicate and market products.
- More Acres into Production
 - A new barley strain may be a viable option for Nelson County
 - Increased varieties of agricultural products may increase growing season
 - Understanding "who's doing it right" to help understand how Nelson county can increase production.
- Finding Niche Speciality Crops that can be grown here
 - Understanding of the economics and return on investment will be key here.
 - Speciality crops can increase agri-tourism and help market the entire Nelson county brand.
- Help people understand the value associated with food choices
 - It is a lifestyle choice that 20 somethings seem to understand the value of.
- Create economically equitable farms that benefit both growers and workers need a model that pays labor well and is economically viable for farmers
- Promote agritourism related to food - county currently focuses on wineries and orchards

- Reevaluate land use tax application to farms - determine if farm is actually producing food or just running a few cows/cutting hay
is land being used efficiently?
reevaluate land use tax how it relates to real farms and production in the county - smaller productive farms do not currently benefit from land use tax - example - Bertonis (Appalachia Star) have 5 acre produce farm - do not receive land use tax break
- Better educate consumers and raise awareness about local food - increasing public school purchasing of local food for consumption by students would be a good start
- Provide more opportunities for aspiring young farmers to use land without acquiring - make financially feasible
- Extension agents help support sustainably grown "cash crops" in the county - determine what fruits and vegetables grow well and are profitable for farmers
- Responsibility- Want students to be able to make good food choices with the most information available.
Hope to teach self awareness and self monitoring so students can establish life long ways of helping themselves
- Priority 2- Accountability- some level of freshness to food offerings.
- Goal is always first to provide nutritious meals on budget, but look to future to see what is possible.
Sushi example.
- Variety in food offerings
Variety shows world to students, international foods can be stimulating and add to learning process.

Suggested Contacts

Pete Perdue (perdue@bpl.coop) - Nelly Maye Bucks Program
Nelson County Food Bank - Dick Nees (neesnest@aol.com)
Cooperative Extension - Youth Programming - Antwan Rose
(arose@vt.edu)
Tom Brugere (Board of Supervisors)



Resolution

Woodbury County Policy for Rural Economic Revitalization “Local Food Purchase Policy”

Preamble

It is the policy of Woodbury County to promote the economic vitality, and public health and safety, of its rural communities. The “Local Food Purchase Policy” is intended to increase regional per capita income, provide incentives for job creation, attract economic investment, and promote the health and safety of its citizens and communities.

Summary

Woodbury County shall purchase, by or through its food service contractor, locally produced organic food when a department of Woodbury County serves food in the usual course of business. The Woodbury County Jail, Work Release Center, and Juvenile Detention facilities are presently serving food in their usual course of business. The contractor may cover for unavailable local organic supply through its current procurement practices with preference to be given local non-organic food products. An arbitration board shall be established to assure fair value to Woodbury County. A single-point-of-contact broker, located in Woodbury County, shall interact with food service contractor, for availability, price, quality, presentation and delivery terms of all locally produced organic food. The current food service contract shall be modified to carry out the intent of this policy. Purchases under this policy shall begin June 1, 2006.

Local Food Purchase Policy

SECTION 1.0 GENERAL POLICY TERMS DEFINED

Section 1.1 Locally Produced Food

‘Locally produced food’ is food that is grown and processed within a 100-mile radius of the Woodbury County courthouse, Sioux City, Iowa. The source of a grown food item, or of processing services, may be from beyond that 100-mile radius when sufficient supply, or service, is not available within that radius.

Section 1.2 Organic Food

‘Organic food’ is defined to include food that has been certified organic by an accredited certifying agency and compliant with the USDA’s National Organic Program standards and guidelines. Food that is being produced by farmers who are converting from conventional to organic production practices, and who are seeking organic certification, is also approved for purchase (i.e., transitional).

Section 1.3 Food Service Contractor

‘Food service contractor’ is defined to include Woodbury County’s existing food service contractor, CBM Food Services, and any assigns or successors.

Section 1.4 Single-Point-of-Contact Broker

‘Single-Point-of-Contact Broker’ is defined to be an incorporated farmer-run cooperative with its main business office located within Woodbury County, Iowa that primarily handles locally produced organic (or transitional) food products as defined hereunder. The only presently known broker to be formed is Woodbury Farm Foods Cooperative, with a business address of 1211 5th Street, Sioux City, Iowa.

SECTION 2.0 GENERAL POLICY PROVISIONS

Section 2.1 County Purchase of Locally Produced Food

Woodbury County shall purchase, by or through its food service contractor (hereinafter referred to as “Contractor”), locally produced organic food when a department of Woodbury County serves food in the usual course of business. The Woodbury County Jail, Work Release Center, and Juvenile Detention facilities are presently the only departments serving food in their usual course of business.

Section 2.2 Organic Food Supply and Non-Organic Cover

Subject to the price and quality provisions contained within this policy, it is mandatory that Contractor purchase available supply of locally produced organic (and transitional) food from the single-point-of-contact broker (hereinafter referred to as “Broker”) in accordance with Contractor’s historical food needs. Contractor may revise recipes to include more local food if deemed more healthful or cost-effective. If the available local organic (or transitional) food supply does not meet Contractor needs, Contractor may look to cover shortfalls through its regular purchasing procurement policies; however, it is desired that Contractor look to local non-organic producers for cover, when practicable.

Section 2.3 Purchase Procedures

Contractor shall work with Broker to establish a timely notification procedure with respect to Contractor periodic demands and Broker delivery guarantees. If Broker is unable to guarantee delivery of a specified item of Contractor demand, there should be sufficient time provided by the procedure for Contractor to exercise cover. Contractor demand shall specify quantity, quality, presentation, and delivery terms.

Section 2.4 Price Terms

Contractor and Broker shall negotiate prices that are fair to all parties concerned for each item traded, and with accountability to Woodbury County Board of Supervisors, as stated herein. It is preferred, but not mandatory, that the overall annual food cost to Woodbury County will not increase by reason of this policy. The price to be paid Broker for a particular food item, if cost is higher for locally produced organic food, shall be established by the following guidelines:

Section 2.4.1 Guidelines for Establishing Item Cost

- (a) The price for a particular food item shall reflect the fixed and variable costs of production, anticipating a reasonable profit to the local farmer, and include reasonable commission to Broker.
- (b) The price for a particular food item under this policy can be compared with the price a farmer (who supplies Broker) charged for the same item to other buyers over the previous 12-month period. Broker must justify any increase in price to the Contractor.
- (c) Contractor shall consider the cost of a particular item in view of the overall contract cost (i.e., another organic item may cost less, so the overall contract cost to the County is the same).
- (d) Fair market value for the food item may be established through comparable sales in comparable markets (i.e., local supermarket price, or the price charged for an item by other Midwest food brokers, wholesalers, and retailers).

- (e) Special attention shall be given if there is material increase in price over what Contractor would otherwise pay for a similar item.

Section 2.4.2 Guidelines for Woodbury County Policy Review

- (a) Woodbury County, through the Organics Board, shall review the costs of this policy in terms of food costs every 3 months to determine if costs to the County under this policy exceed existing contract price. A report to the Woodbury County Board of Supervisors will be provided on a quarterly basis.
- (b) If the overall food service contract cost increases as a result of this policy, the higher cost can never exceed the expected benefits of the policy to Woodbury County. In determining the value of the policy to Woodbury County, it is accepted as general principle that dollars expended locally will circulate within the regional economy.
- (c) Woodbury County will consider the impact of this policy on the reduction of health care costs related to inmates, behavioral changes of inmates, and other factors that may potentially reduce costs to Woodbury County.
- (d) If the policy results in job creation by Broker, expanded markets for local organic products, or results in increased organic food production within the county, Woodbury County will compare the increase in costs under this policy with comparable costs associated with other forms of economic development tools to determine reasonableness of the increased costs.
- (e) Allowances will be made for the learning curves of local producers and suppliers to meet county demand.
- (f) It may be acceptable for the county to endure higher costs in the short term if there is clear evidence that in so doing, economics of size are being built that will reduce costs in the long term.

Section 2.5 Arbitration Board, Non-Binding Arbitration

An Arbitration Board shall be established by Woodbury County to hear any disputes between Contractor, Contract-Broker, or Woodbury County in the operation of this policy. Dispute resolution shall be by “non-binding arbitration”. Woodbury County directly, or by and through Contractor, reserves the right to reject a proposed purchase of locally produced organic food.

SECTION 3.0 SPECIFIC OBLIGATIONS OF PARTICIPANTS

Section 3.1 Special Obligations of Contractor

Section 3.1.1 Food Service Contract

Contractor has existing obligations to Woodbury County pursuant to the Food Service Contract. Except as to modifications mandated by this Local Food Purchase Policy, Contractor obligations shall remain in full force and effect under its existing Food Service Contract with Woodbury County. Woodbury County and Contractor shall review the existing food service contract and make such modifications as are necessary to implement this policy.

Section 3.1.2 Policy Initiation and Planning

The initial purchase of locally grown organic food shall begin on June 1, 2006. Contractor and Broker, from the time of the adoption of the policy to June 1, 2006, shall develop a reliable and efficient process that will facilitate the purposes of

this policy. Woodbury County, Contractor, and Broker shall also work during this time to develop reporting schedules from which to judge the success of this policy, as further specified in Section 4.2 below.

Section 3.1.3 Recipes and Food Quality

It is encouraged that Contractor review recipes, and to increase the locally grown organic food content, when such modification would be more healthful and would reduce or not substantially increase the total contract costs.

Section 3.1.4 Reporting to Woodbury County of Food Costs

Contractor is required under this policy to report to the Woodbury County Rural Economic Development Department, on a quarterly basis, with its first report on September 1, 2006, any increase or decrease in price it has paid for locally produced organic food as compared with the cost of similar items that it would have had to purchase if Contractor followed its standard procurement practices.

Section 3.1.5 Contractor Notice or Rejection of Increased Price

Contractor may request of Broker a justification of price if materially higher than it would otherwise pay for the food item. Contractor reserves the right to reject the sale if price is materially higher, without justification, than it presently pays for similar items taking into account the factors set forth in Section 2.4.1.

Section 3.1.6 Local Non-Organic Food Purchase As Cover

Contractor is required under this policy to purchase locally grown organic (and transitional) food to the extent that supply is available. Contractor is encouraged to consider the purchase of locally grown non-organic food when the locally grown organic supply cannot fully meet Contractor demand for a particular food item.

Section 3.2 Special Obligations of Broker

Section 3.2.1 Broker Organization

Broker must be a cooperative, preferably an Iowa Code 501A organization, that maintains standard liability insurance and designates a single contact to Contractor through whom all communications shall be made. The Broker must consist of a Board of Directors with at least 50% of the Board of Directors being farmer-suppliers to the cooperative.

Section 3.2.2 Periodic Publications of Demand and Supply

Broker shall publish in a conspicuous place, at its main place of business, the Contractor listing of all food items purchased by Contractor over the previous 12-month period. Broker shall also publish in a conspicuous place, at its main place of business, and by email to farmer members (if farmer has such email service), a copy of Contractor periodic demand for food items; said notice shall be given within 18 hours of Broker receipt.

Section 3.2.3 Certification and Transitional Farm Products

Broker shall deliver only certified organic products, or products from farms that are transitioning to certified organic, in accordance with the USDA's National Organic Program standards and guidelines. Transitional farm products are those produced by farmers who currently employ organic practices in accordance with USDA standards, but cannot qualify for organic certification until a transitional period is completed. Broker shall verify farmer certification and verify transitional farm organic practices.

Section 3.3 Special Obligations of Woodbury County

Section 3.3.1 Maintain Listings of Organic and Non-Organic Farmers

Woodbury County Rural Economic Development shall compile contact information and production data for all farmers who supply food items to Broker. Woodbury

County will also maintain a listing of non-organic farmers, located within the 100-mile local food radius, who want to make their crops available for purchase by Contractor as cover for unavailable organic supply.

Section 3.3.2 Additional Markets for Local Food Production

Woodbury County Rural Economic Development shall investigate markets, beyond that which is established by this policy, for local food producers and shall publish opportunities that become available and known to Woodbury County. One goal of this policy is to provide an example to local school districts, and other institutional consumers of food products, to consider establishing local food purchase policies that will promote health and improve the local farm economy.

SECTION 4.0 REPORTING PROVISIONS AND POLICY DURATION

Section 4.1 Monitoring Impacts of Policy and Reporting Schedule

Woodbury County shall monitor, on a quarterly basis, the impacts of this Local Food Purchase Policy to determine overall benefits and costs to Woodbury County taxpayers. Reporting from Contractor and Broker, as provided in Section 4.2 below, shall provide most of the information needed to accurately monitor the success of this policy.

Section 4.2 Producer and Product Purchase Reporting

In exchange for County efforts to promote local food sales, Contractor and Broker shall provide a joint report to Woodbury County Rural Economic Development Department, on a quarterly basis, that supplies the following information:

- (a) What are the costs of food purchased by Woodbury County that were sourced by local and non-local, organic and non-organic sources;
- (b) How much value-added food products did the Broker produce and how much of this used products from local producers;
- (c) What percentage of Broker's business is devoted to filling the Woodbury County food service contract;
- (d) Amount of production costs of producer-members that are spent locally;
- (e) Dividends returned to producer members;
- (f) Labor statistics to determine increase in jobs and wage information;
- (g) Farm and producer information that will disclose acreage devoted to organic production practices, type of product sold, value of organic sales per producer, and other information as requested by Woodbury County needed to determine success of this policy.

Section 4.3 Policy Duration

The Local Food Purchase Policy shall be in force until amended or revoked by Woodbury County. Woodbury County reserves the right to amend, or revoke, this policy for any reason.

RESOLUTION NO. 496

ESTABLISHING A LOCAL FOOD PURCHASING POLICY FOR ALBANY COUNTY

Introduced: 12/8/08

By Messrs. Nichols, Bullock, Domalewicz, Gordon, Joyce and Steck:

WHEREAS, It is the policy of Albany County to promote the economic vitality and public health and safety of its communities, and

WHEREAS, The “Local Food Purchasing Policy” is intended to increase regional per capita income, provide incentives for job creation, attract economic investment, fight global climate change and promote the health and safety of its citizens and communities, and

WHEREAS, “Locally produced food” shall mean food that is grown and processed within a 100-mile radius of the Albany County Courthouse located on Eagle Street in the City of Albany, NY, and

WHEREAS, A study in Iowa found that a regional diet consumed 17 times less oil and gas than a typical diet based on food shipped across the country and according to a study by the New Economics Foundation in London, a dollar spent locally generates twice as much income for the local economy, and

WHEREAS, Locally produced food makes farming more economically viable keeping farmers in business and saving valuable farmland from development, and

WHEREAS, While produce that is purchased in the supermarket or a big-box store has been in transit or cold-stored for days or weeks, produce purchased locally has often been picked within 24 hours providing fresh produce that not only improves the taste of food, but also the nutritional value of food which declines over time, and

WHEREAS, When a farmer is producing food that will not travel a long distance a shorter shelf life allows the farmer to try small crops of various fruits and vegetables making farmers more profitable and providing consumers with more choices, now, therefore be it

RESOLVED, Albany County shall establish a “Local Food Purchasing Policy” that shall include a budget allocation equaling at least 10% of the annual costs of the county’s food purchases, including but not limited to, such food purchased for Albany County’s Residential Healthcare Facilities and the Albany County Correctional Facility, derived from locally produced food, and, be it further

RESOLVED, That the Local Food Purchasing Policy shall be expanded and be updated annually by the County Legislature with guidance from a special sub-committee or task force established and appointed by the Majority Leader and Minority Leader of the Albany County Legislature, and, be it further

RESOLVED, That the Clerk of the County Legislature is directed to forward certified copies of this resolution to the appropriate County Officials.

Referred to Law Committee. 12/8/08

SAMPLE PURCHASING GUIDELINES –
“SPECS” LARGE SCALE SCRATCH COOKING ENVIRONMENT – JUNE 2007

Introduction

The approach to procurement in the sustainable and healthy large scale scratch cooking environment outlined in this guide applies principles of whole foods cooking with sourcing specifications aligned with the philosophy that future generations will benefit from the Sustainable Best Practices adopted and utilized from this point forward.

Directors, Chefs and Purchasers create healthy “delicious revolutions” not just by cooking but by designing their large scale systems around the purchase of whole sustainably produced products, to the best of their ability.

The flexibility and control that the scratch cooking system allows a district enables the community from the local government to board levels down to the parents, students and staff to participate in the growth of a secure locally based system which will be both economically beneficial for the community as well as promoting healthy lifestyles for all participants now and in future generations.

This guide assumes that all pre-prepared and processed items purchased for use in menus will meet the USDA Nutrition Policies and that these guidelines as Sustainable Best Practices are meant to complement the USDA Policy, with regard to menu development for large scale scratch cooking environments.

The guide below breaks down menus into purchasing components, however a few basic guidelines reflect all decision making:

- Locally Grown and/or Owned and Produced
- Best Quality
- Best Practice
- Best Price
- Reusable and/or recyclable packaging and shipping materials
- Ability to Service Client

Whole Fruits and Vegetables

Always: Combination of Best Quality, Best Practice, Best Price, Ability to Service Client

Fruits and Vegetables Fresh and In Season

Growing Practice Local:

- Organic
- Chemical Free - non-certified
- IPM

Exceptions: In Season but not Local – (Organic preferred if budget allows – IPM otherwise)

- Citrus – (Florida for East and Midwest regions; CA for Western States)
- Bananas – (Dominican Republic and Equador being the primary Fair Trade and Organic producers)
- Pantry staples such as onions, celery, carrots in 4 season climates without storage options
- Kids’ Favorites: Broccoli, Cauliflower, Salad Greens, Cooking Greens – as needed, dependent on districts ability to process or store other menu vegetable options

SAMPLE PURCHASING GUIDELINES –
“SPECS” LARGE SCALE SCRATCH COOKING ENVIRONMENT – JUNE 2007

Whole Fruits and Vegetables - Continued

Other considerations:

- Flavor – all other attributes being equal – best flavor will be purchased first
- For Vendors/Distributors: Prioritize working with local growers as a regular part of their business
- For Farmer Direct Purchasing: Ability to meet quantity needs or partner with other farmers to meet quantity demands of client; Ability to deliver
- Pack size: Preferred vendors work in industry standard vegetable pack size – for example; red leaf lettuce 24 heads/case, however bulk purchasing by pound will be acceptable by agreed arrangement

Animal Proteins – Chicken, Dairy Products, Beef, Pork, Fish

Always: Combination of Best Quality, Best Practice, Best Price, Ability to Service Client

Growing Practice

- Humane Production – from farm to slaughter
- Organic
- Natural – Hormone, Chemical Free, Additive Free
- Natural – Grass raised and finished
- Sustainable – CAFO and Cage Free, Adequate Stocks Regionally

Location

- Local
- Regional
- Small to Mid sized producers

Other considerations:

- Flavor – all other attributes being equal – best flavor will be purchased first
- Transport and Delivery: Ability to deliver in quantities needed by client; Appropriate shipping and/or transport methods for example the ability to maintain product frozen and/or under 40 degrees F
- USDA Commodities: The unknown origin and practice of Commodity Unprocessed Proteins is unavoidable at present. With knowledge that some of this product might not meet the District's purchasing guidelines, under the current budget constraints utilizing Commodity food dollars toward unprocessed proteins is necessary at the present time.

Foods Produced Outside of District Kitchens

Always: Combination of Best Quality, Best Practice, Best Price, Ability to Service Client

Bakery Products and Snack Items:

- Flavor – all other attributes being equal – best flavor will be purchased first
- Locally Owned and Operated Business
- Locally Produced
- Locally sourced ingredients as much as possible
- Organic ingredients preferred
- Whole Grain
- No Trans Fats/Hydrogenated and Partially Hydrogenated Oils
- No High Fructose Corn Syrup
- No Additives, coloring or chemical preservatives
- Fruit, Vegetables and Animal Protein ingredients reflective of this purchasing guideline

SAMPLE PURCHASING GUIDELINES –
“SPECS” LARGE SCALE SCRATCH COOKING ENVIRONMENT – JUNE 2007

Foods Produced Outside of District Kitchens - Continued

Entrees or Entrée Ingredients (for example, Tofu)

- Flavor – all other attributes being equal – best flavor will be purchased first
- Locally Owned and Operated Business
- Locally Produced
- Locally sourced ingredients as much as possible
- Organic ingredients preferred
- Whole Grain
- Fruit, Vegetables and Animal Protein ingredients reflective of this purchasing guideline
- No Trans Fats/Hydrogenated and Partially Hydrogenated Oils
- No High Fructose Corn Syrup
- No Additives, coloring or chemical preservatives

Beverages:

- No High Fructose Corn Syrup
- No Additives, coloring or chemical preservatives including sugar or sugar substitutes
- If fruit derived, organic preferred – 100% juice only
- Low Environmental impact packaging preferred

Other considerations:

- Flavor – all other attributes being equal – best flavor will be purchased first
- Production Facility must meet Federal and State specifications for Health and Safety
- Transport and Delivery: Ability to deliver in quantities needed by client; Appropriate shipping and/or transport methods for example the ability to maintain product frozen and/or under 40 degrees F
- USDA Commodities: The unknown origin and practice of Commodity Minimally Processed ingredients such as Rice, or Canned Products such as Fruit or Tomato Products is unavoidable at present. With knowledge that some of this product might not meet the District's purchasing guidelines, under the current budget constraints utilizing Commodity food dollars toward some Minimally Processed ingredients and/or Canned Ingredients is necessary at the present time.



Northern NY Agricultural Development Program 2004 Project Report

A Rural & Ag Economic Development Specialist for Franklin County

Project Leader(s):

Bernadette Logozar, Rural & Ag Economic Development Specialist, Cornell Cooperative Extension of Franklin County, 355 West Main Street, Suite 150, Malone, NY 12953, 518-483-7403, fax: 518-483-6214 ,email: bel7@cornell.edu

Collaborator(s):

Carl Tillinghast, Director, Cornell Cooperative Extension Franklin County; Harry Fefee, Chairman, Franklin County Ag & Farmland Protection Board

Background:

The position of Rural & Ag Economic Development Specialist was created out of the Franklin County Agriculture & Farmland Protection Plan (published March 2001). Funding support for this position came through the Northern New York Agriculture Development Program and Cornell Cooperative Extension of Franklin County. Cornell Cooperative Extension (CCE) of Franklin County hired Bernadette Logozar in the summer of 2002 to fill the position of Rural & Ag Economic Development Specialist and to work in the area of ag and rural economic development.

Methods:

- During her time with CCE Franklin County, Ms. Logozar has worked with farmers and rural entrepreneurs in Franklin & surrounding counties in the area of marketing, business development, regulations, alternative agriculture, diversification and small farm operations.
- Ms. Logozar has been proactive in establishing and strengthening relationships with other agencies and organizations in Franklin & surrounding counties that would assist farmers. This list includes: Franklin County IDA, Franklin County Tourism, local Chambers of Commerce, Adirondack North Country Association (ANCA), Adirondack Farmers' Market Cooperative (AFMC).

- Ms. Logoza served as the Regional Coordinator for the tri-county Marketing Initiative Adirondack Harvest; collaborated with ANCA to publish the “Pasture Raised Meat Directory”; has secured grant funding to offer small livestock producers a focused marketing series and create the “Livestock Producers’ Marketing Toolkit”; has helped to establish the North Country chapter of the Women’s Business Owners’ Network (WBON); offers a number of innovative programming on marketing, e-commerce, business planning, pricing, rules & regulations for farmers’ markets, community economic development.
- Ms. Logoza is a part of the Small Farms Task Force, the Small Farms Quarterly Editorial Team, a member of the Ag Economic & Community Development Program Work Team, a member of the Community Economic Renewal Program Work Team, a Director on the Board of Directors of the local Chamber of Commerce, a member of the NNY International Ag Expo Board of Directors and co-chapter coordinator for the Women’s Business Owners’ Network.

Results:

- Through the Adirondack Harvest Marketing Initiative 115 farms in the tri-county region and 10 farmers’ markets are listed on the *Adirondack Harvest* website (www.adirondackharvest.com) & Pasture Raised Meat Directory, the awareness of the agriculture and the variety of products, which are grown, raised and marketed locally has increased. The direct result has been greater visitors to local farms and more money in these direct market farmers’ pockets.
- As well, because Ms. Logoza’s work straddles rural & ag economic development she acts as a liaison between the non-farm small businesses (i.e. store owners) and on-farm businesses (farmers) and an information resource for critical areas of interest to the community (i.e. wind power, small business development). Future projects involve bringing local farmers and other small businesses closer together.

Conclusions/Outcomes/Impacts:

- Have encouraged more direct market farmers to become involved in Adirondack Harvest, to date 35 Franklin County farms are participating members. The number of farmers markets in the county has increased, enabling consumers more outlets to buy local.
- Through the increased involvement of direct market farmers in Franklin County in Adirondack Harvest, in 2005 Franklin County Tourism has included agriculture in their full color brochure for tourists to visit.

Outreach

Agricultural Economic Development CCE of Franklin County has made some major steps forward to ensure the profitability and sustainability of our small farms and rural agribusinesses. This past year CCE...

- Offered an ***E-Commerce Course*** for small rural business owners. Topics included: ***E-commerce basics, market research, and building your own website.***
- Continued to work with ***Livestock Producers*** to explore and fine-tune their ***marketing options*** through the development of the ***Marketing Toolkit***. Worked closely with ANCA to encourage ***agricultural diversification*** through the formation and facilitation the ***Pastured Poultry Group***. Are currently to secure funding sources through ***Heifer International*** for much needed infrastructure for local farmers.
- Worked with ***existing agencies*** such as Industrial Development Agency of Franklin County, Chambers of Commerce, Franklin County Tourism and others ***to increase the number of successful rural based businesses*** in Franklin County.

Community Economic Development

In 2004, CCE expanded programming to include ***Community Economic Development*** (CED). The purpose of community and economic decision-making is to improve the capacity of citizens, community leaders and policy makers to understand and respond to external and internal forces for change. ***Education & outreach programming*** included:

- ***NNY Community Economic Development Conference*** was hosted by CCE in partnership with ***Center for the Advancement of Sustainable Tourism (CAST)***, ***Fuller Communications & NY Main Street Alliance*** connected local government, community economic development leaders and agencies to local, regional and state resources. This regional conference brought participants from Franklin, St. Lawrence, Clinton, Essex, Hamilton, & Warren Counties.
- ***Community& Economic Renewal “Roadshow” Seminar***—linking local community development leaders to research and resources around the state.

Community Economic Development Summer Series—connected local government and the community to resources and information. Topics: ***Socioeconomic Trends and Well-being of NYS Citizens*** and ***Community Sustainability: Holistic Approaches to Community Development.***

Acknowledgments:

This project was funded by a grant from the Northern New York Agricultural Development Program and by funds from Cornell Cooperative Extension of Franklin County.

Northern New York Agricultural Development Program:

The Northern New York Agricultural Development Program provided funding for this agriculture-based economic development project. The Northern New York Agricultural Development Program is a farmer-driven research and education program specific to New York state's six northernmost counties: Jefferson, Lewis, St. Lawrence, Franklin, Clinton and Essex.

Thirty-three farmers serve on the Program board led by Co-Chairs Jon Greenwood of Canton (315-386-3231) and Joe Giroux of Plattsburgh (518) 563-7523. For more information, contact Jon, Joe or R. David Smith at 607-255-7286 or visit www.nnyagdev.org # # #

Nutrition Education in Schools

This paper is part of a series of nutrition policy profiles prepared by Prevention Institute for the Center for Health Improvement (CHI).

Background

The goal of nutrition education is to motivate participants to eat a healthy diet. Children are a very important audience for nutrition education because a healthy diet is essential for their normal growth and development, and because children are establishing food patterns that carry into adulthood. Good nutrition promotes not only better physical health and reduced susceptibility to disease, but has also been demonstrated to contribute to cognitive development and academic success.¹ Left to their own devices, children will not automatically select healthy foods. Their innate preference for sweet foods makes them particularly vulnerable to the highly sugared cereals, soda, and candy that are marketed to them virtually from birth.² In order to develop lifelong healthy eating patterns, children need to be introduced to a variety of nutritious foods in a positive manner.

Schools are potentially excellent settings for nutrition education. Virtually all children attend school every weekday and consume at least one or two meals daily on school grounds. The school environment can strongly influence children's eating behaviors, whether through the examples provided by teachers and other adults, the food served in the cafeteria and classroom, or through exposure to peer habits. Effective nutrition education helps shape these environmental factors and assists students in developing the skills needed to select healthy diets.

Policy

Include comprehensive nutrition education as a mandatory subject in the school curriculum.

Given that eating habits have a profound impact on health in childhood and adulthood, schools provide a logical venue for ensuring that nutrition education reaches all school-age children. There are many examples of nutrition education programs that have been successfully introduced in schools. The two programs presented here have been well evaluated and have demonstrated to have a positive impact on children's eating.

The Child and Adolescent Trial for Cardiovascular Health (CATCH) program introduced a three-year nutrition education and physical activity program in 56 elementary schools in California, Louisiana, Minnesota, and Texas.³ Teachers trained in the CATCH curriculum taught 5,100 ethnically diverse third graders the *Adventures of Hearty Heart and Friends* for five weeks. This was followed by the *Go for Health* curriculum, which was taught to fourth graders for twelve weeks and fifth graders for eight weeks, and was aimed at reducing fat and sodium consumption. The curricula "targeted specific psychosocial factors" and involved skill building related to eating behaviors and physical activity patterns.⁴ Classroom nutrition education was supported by Eat Smart training for school food service aimed at reducing fat and sodium content of school meals.

The St. Paul Public School District in Minnesota utilized the 5-a-Day Power Plus curriculum to promote at least five servings of fruits and vegetables a day among multi-ethnic fourth and fifth graders.⁵ The program was developed and tested in the school district by the State Health Department in collaboration with the University of Minnesota as part of a four-year research study funded by the National Cancer Institute (grant #R01 CA59805). The 16-lesson curriculum at each grade level is behaviorally oriented, with students setting goals for fruit and vegetable consumption throughout the 8-week program period. Students work in teams on fun group activities to build skills for eating fruits and vegetables and receive peer recognition for their team and individual achievements. The curriculum includes weekly classroom snack preparation and tasting activities to increase exposure to fruits and vegetables and build preparation skills. Students are also given activity and information packets to bring home to parents. The classroom curriculum is supported by a food service component that increases the choice, availability, and appeal of fruits and vegetables served in school lunches. The Minneapolis School District is currently offering the curriculum in 80 fourth grade classrooms according to Gretchen Taylor, MPH, RD (personal communication, February 2001). Teachers register to receive training in the 5-a-Day Power Plus curriculum, and the district provides funding for the curriculum materials and food (via food service) for classroom education.

Effectiveness

Both the CATCH and 5-a-Day Power Plus programs improved children's eating habits.^{6,7} After three years of nutrition education, CATCH students decreased their reported daily intake of fat calories from 33 percent to 30 percent. This difference was maintained in a three-year follow-up study. The proportion of calories from fat in school lunches also decreased significantly from 39 percent to 32 percent. Among students participating in the 5-a-Day Power Plus program, fruit and vegetable consumption increased by more than a half serving per day, on average. In addition, the amount and variety of fruits and vegetables in the school cafeteria increased.

These results demonstrate that nutrition education plays an important role in an overall strategy for improving children's eating habits. To be effective, classroom education needs to occur in conjunction with a school breakfast and lunch program that exemplifies the lessons being taught. A well-designed curriculum should focus on developing skills in food selection and preparation rather than just imparting information about the relationship between diet and health. Information must be suited to the developmental stage of the children and provide numerous, graduated educational lessons. Currently, most students receive nutrition education based on the particular interest of their teachers. The National Association of State Boards of Education has developed a model policy for integrating nutrition education into school health curricula and a coalition in California has produced a position paper on providing school-based nutrition education through the Health School Environment Policy and Community Action Summit.^{8,9}

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A Policy-Based School Intervention to Prevent Overweight and Obesity

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What's Known on This Subject

The increasing prevalence and consequences of childhood obesity have prompted calls for broad public health solutions that reach beyond clinic settings. Schools are ideal settings for population-based interventions. Despite their intuitive appeal, the results for school-based interventions are mixed.

What This Study Adds

This study has several distinctive features: (1) it is a school-based intervention that is community originated, (2) the population is composed of fourth- to sixth-graders from a low socioeconomic status, and (3) the program is effective and particularly so for blacks.

ABSTRACT

BACKGROUND. The prevalence and seriousness of childhood obesity has prompted calls for broad public health solutions that reach beyond clinic settings. Schools are ideal settings for population-based interventions to address obesity.

OBJECTIVE. The purpose of this work was to examine the effects of a multicomponent, School Nutrition Policy Initiative on the prevention of overweight (85.0th to 94.9th percentile) and obesity (>95.0th percentile) among children in grades 4 through 6 over a 2-year period.

METHODS. Participants were 1349 students in grades 4 through 6 from 10 schools in a US city in the Mid-Atlantic region with $\geq 50\%$ of students eligible for free or reduced-price meals. Schools were matched on school size and type of food service and randomly assigned to intervention or control. Students were assessed at baseline and again after 2 years. The School Nutrition Policy Initiative included the following components: school self-assessment, nutrition education, nutrition policy, social marketing, and parent outreach.

RESULTS. The incidences of overweight and obesity after 2 years were primary outcomes. The prevalence and remission of overweight and obesity, BMI z score, total energy and fat intake, fruit and vegetable consumption, body dissatisfaction, and hours of activity and inactivity were secondary outcomes. The intervention resulted in a 50% reduction in the incidence of overweight. Significantly fewer children in the intervention schools (7.5%) than in the control schools (14.9%) became overweight after 2 years. The prevalence of overweight was lower in the intervention schools. No differences were observed in the incidence or prevalence of obesity or in the remission of overweight or obesity at 2 years.

CONCLUSION. A multicomponent school-based intervention can be effective in preventing the development of overweight among children in grades 4 through 6 in urban public schools with a high proportion of children eligible for free and reduced-priced school meals.

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Key Words

children and adolescents, community pediatrics, obesity, population-based studies, school-based program

Abbreviations

SNPI—School Nutrition Policy Initiative
CDC—Centers for Disease Control and Prevention
GEE—generalized estimating equation
MI—multiple imputation
OR—odds ratio
CI—confidence interval

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THE INCREASING PREVALENCE and serious consequences of childhood obesity have prompted calls for broad public health solutions that reach beyond clinic settings.¹ Schools are ideal settings for population-based interventions to address obesity.^{2,3} Children spend approximately half of their waking hours in school. Schools provide 1 to 2 meals daily and are a natural setting for education about healthy food choices. Despite their intuitive appeal, the results for school-based interventions have been mixed. Although some school-based programs have had favorable effects on BMI,⁴⁻⁶ many have not.⁷⁻⁹ The reason for this is unknown but may include an insufficient dose, barriers to effective implementation, the inability to effectively target children at highest risk, and that the behaviors targeted by interventions may not relate directly to body weight. Nearly all of the interventions tested have been developed and/or implemented by university-based teams. Few studies have examined the effects of school-based programs that have originated in the community. Also, as Doak et al¹⁰ note, few studies have examined the possible adverse effects

of obesity prevention programs, such as worsening body image or decreases in BMI z scores among those who are normal weight or underweight.

The purpose of this study was to examine the effects of a multicomponent School Nutrition Policy Initiative (SNPI) on the prevention of overweight and obesity among children in grades 4 through 6 over a 2-year period. Given the disproportionately high rates of obesity among children in lower socioeconomic status groups,¹¹ the study was implemented in schools that had $\geq 50\%$ of children eligible for federally subsidized, free, or reduced-price meals.

METHODS

Study Design

The study was conducted in 10 schools in the School District of Philadelphia. Schools were the unit of randomization and intervention. Ten schools were selected from among 27 Kindergarten through eighth grade schools with $\geq 50\%$ of students eligible for free or reduced-price meals. To obtain pairs of 2 schools per cluster, the 27 schools were first organized into 5 clusters of 4 to 7 schools each, based on school size and type of food service (eg, full service [2 clusters] or heat and serve [3 clusters]). Schools within each cluster were approached to participate in a predetermined, random order. When 2 schools in each cluster agreed to participate, the schools were randomly assigned as intervention or control schools. A total of 12 schools were approached; 2 declined and 10 were enrolled. Within schools, written parental consent and child assent were required for individual children to participate. The study was approved by the University of Pennsylvania Institutional Review Board.

Intervention

The SNPI was developed and delivered by The Food Trust, a community-based organization, and was funded by the US Department of Agriculture Food Stamp Nutrition Education Program. A task force was developed, which devoted a year to discerning how best to adapt the Centers for Disease Control and Prevention (CDC) Guidelines to Promote Lifelong Healthy Eating and Physical Activity¹² to meet the needs of the Philadelphia school district. Committees were established to make recommendations on the CDC guidelines and to work with the Food Services Division, which operates food services in all Philadelphia public schools, to remove all sodas, sweetened drinks, and snacks that did not meet the standards set by the committee (see below in nutrition policy) from the vending machines and the cafeteria line. All of the schools were under the direction of the district's Food Service Division, which agreed to make the necessary changes in the intervention schools, while making no changes to the control schools.

The SNPI included the following components: (1) school self-assessment; (2) nutrition education; (3) nutrition policy; (4) social marketing; and (5) parent outreach. Each component is described briefly below. A

more detailed description of the intervention is available at www.thefoodtrust.org.

Self-Assessment

Schools assessed their environments by using the CDC School Health Index.¹³ Each school formed a Nutrition Advisory Group to guide the assessment. Teams included administrators, teachers, nurses, coaches, and parents. After completing ratings on healthy eating and physical activity, schools developed an action plan for change. Schools proposed various strategies, such as limiting the use of food as reward, punishment, or for fundraising; promoting active recess; and serving breakfast in classrooms to increase the number of students eating a healthy breakfast.

Staff Training

All of the school staff in the intervention schools were offered ~ 10 hours per year of training in nutrition education. At these trainings, staff received curricula and supporting materials such as *Planet Health*⁴ and *Know Your Body*,¹⁴ as well as nutrition and physical activity theme packets designed to integrate classroom lessons, cafeteria promotions, and parent outreach. Staff attended trainings both across and in intervention schools, giving them a chance to work together as a team and to share ideas with their counterparts in other intervention schools.

Nutrition Education

The goal was to provide 50 hours of food and nutrition education per student per school year, which was based on the National Center for Education Statistics guidelines.¹⁵ The educational component was designed to be integrative and interdisciplinary. Its purpose was to show how food choices and physical activity are tied to personal behavior, individual health, and the environment. Nutrition was integrated into various classroom subjects. For example, students used food labels to practice fractions and nutrition topics for writing assignments.

Nutrition Policy

In each of the intervention schools, all of the foods sold and served were changed to meet the following nutritional standards, which were based on the Dietary Guidelines for Americans and converted from the percentage of calories to grams per serving,¹⁶ which is in alignment with information shown on nutrition labels: all of the beverages were limited to 100% juice (recommended 6-oz serving size), water (no portion limits), and low-fat milk (recommended 8-oz serving size). Snack standards allowed ≤ 7 g of total fat, 2 g of saturated fat, 360 mg of sodium, and 15 g of sugar per serving. Before these changes, soda, chips, and other drinks and snacks had been sold in vending machines and a la carte in the cafeteria of schools with full-service kitchens. Schools without full-service kitchens did not sell a la carte food items or have vending machines. Schools were matched

by type of food service to control for differences in the sales of vending and a la carte items.

Social Marketing

The SNPI used several social marketing techniques. To increase meal participation and consumption of healthy snack and beverage items, students who purchased healthy snacks and beverages or who brought in snack items that met the nutritional standards from home or local stores received raffle tickets. Raffle winners received prizes for healthy eating, such as bicycles, indoor basketball hoops, jump ropes, and calculators. The message "Want Strength? . . . Eat Healthy Foods," paired with an easily recognizable character, reinforced healthy messages through incentives and frequent exposure. Both the slogan and the character were developed through focus groups with students who were not in the study schools but were of similar age, ethnicity, and socioeconomic status.

Family Outreach

Nutrition educators reached family members through home and school association meetings, report card nights, parent education meetings, and weekly nutrition workshops. They encouraged parents and students, on the way to and from school, to purchase healthy snacks. Students participated in the 2-1-5 challenge to be less sedentary (≤ 2 hours per day of television and video games), to be more physically active (≥ 1 hour per day), and to eat more fruits and vegetables (≥ 5 per day). Intervention schools reduced the amount of unhealthy foods sold at parent fundraisers and discouraged parents from sending sweets to teachers at holiday time. One school chose to have a weekly breakfast club with female athletes from a local university.

Outcomes

Measurements were collected at baseline in the spring semester and again at year 2 in the spring semester. Interim weight data were collected in the spring semester of year 1. Return visits were scheduled within 1 month to reach absent students. Race/ethnicity data were self-reported by each child and were collected to assess potential interaction effects with the intervention, as well as to examine the disproportionate prevalence of overweight and obesity.

Weight and Height

Heights and weights were measured annually on a digital scale and wall-mounted stadiometer by a trained research team with a standardized protocol. The team was not blinded to treatment condition, because social marketing materials were in the intervention schools. BMI z scores and percentiles based on age and gender were calculated for each student using CDC growth charts.¹⁷ Each participant was classified into 1 of 4 weight categories as described by the Institute of Medicine¹: underweight (BMI for age less than the fifth percentile; $n = 23$; 2.2%); normal weight (BMI for age from the

fifth to 84.9th percentile; $n = 619$; 57.9%); overweight (BMI for age from the 85th to 94.9th percentile; $n = 182$; 17.1%); and obese (BMI for age >95 th percentile; $n = 245$; 22.9%).

Dietary Intake, Physical Activity, and Sedentary Behavior

Dietary intake, specifically total energy consumed (kilojoules), fat consumption (grams), and the number of fruit and vegetable servings, was measured with the Youth/Adolescent Questionnaire, a self-administered 152-item food frequency questionnaire, which has been used to measure dietary intake in previous studies.^{18,19} Physical activity and sedentary behavior, specifically television viewing, were measured by the Youth/Adolescent Activity Questionnaire, a self-administered 24-item questionnaire also used in past research. Total inactivity was calculated by combining all of the 8 sedentary behaviors that were assessed in the questionnaire. Finally, body image was assessed using the body dissatisfaction subscale of the Eating Disorder Inventory-2 (EDI-2).²⁰

Statistical Analysis

Incidence of overweight and obesity after 2 years (percentage of subjects who were initially not overweight or obese but who became overweight or obese) was analyzed as a primary outcome, because the goal of the intervention was the prevention of overweight and obesity. Prevalence (percentage of subjects who were overweight or obese) and remission (percentage of subjects who were overweight or obese at baseline but were not overweight or obese at follow-up) were analyzed as secondary outcomes. Analyses of overweight and obesity were conducted separately. Analyses were also conducted after collapsing the overweight and obese categories (≥ 85 th percentile). Additional secondary analyses included BMI z score, total energy and fat intake, fruit and vegetable consumption, body dissatisfaction, and hours of activity and inactivity, including weekday television viewing after 2 years.

The generalized estimating equations (GEE) method was used to account for the intraclass correlation of responses within a school (ie, students within a school are more similar than students between schools). In addition to individual-level covariates measured at baseline, an indicator variable for each randomization pair was included in these models as fixed effects to account for school matching.^{21,22} To assess the primary outcome of incidence and the secondary outcomes of prevalence and remission, GEE was used to model a binary outcome. These models included race/ethnicity, gender, age, and an indicator of the randomization pair as covariates. The models predicting prevalence also controlled for prevalence at baseline.

For the remaining secondary outcomes, GEE was also used to model a Poisson distribution for count variables (eg, hours of inactivity and television watching). We note that, because GEE and random coefficients analyses

TABLE 1 Baseline Characteristics of Participants

Variable	Control (n = 600)	Intervention (n = 749)	P
Female, n (%)	313 (52.17)	412 (55.01)	.30
Age, mean $\pm$ SD, y	11.20 $\pm$ 1.0	11.13 $\pm$ 1.0	.20
Race/ethnicity, n (%)			<.001
Black	281 (46.83)	332 (44.33)	
Asian	166 (27.67)	128 (17.09)	
Hispanic	35 (5.83)	168 (22.43)	
Other	33 (5.50)	41 (5.47)	
White	85 (14.17)	80 (10.68)	
Weight status, n (%)			.08
Underweight	18 (3.00)	10 (1.34)	
Normal weight	352 (58.67)	420 (56.07)	
Overweight	99 (16.50)	129 (17.22)	
Obese	131 (21.83)	190 (25.37)	
BMI, mean $\pm$ SD, kg/m ²	20.71 $\pm$ 5.0	20.98 $\pm$ 5.1	.33
BMI z score, mean $\pm$ SD	0.65 $\pm$ 1.1	0.71 $\pm$ 1.1	.35
Fruit and vegetable, mean $\pm$ SD, kJ/d (kJ/d)	5.64 $\pm$ 4.2	5.32 $\pm$ 3.9	.16
Total energy, mean $\pm$ SD, kJ/d (kJ/d)	13979.41 $\pm$ 8170.68	14029.85 $\pm$ 8112.72	.91
Total Fat, mean $\pm$ SD, g/d	118.46 $\pm$ 72.2	119.18 $\pm$ 71.0	.86
Activity, mean $\pm$ SD, h/wk	26.18 $\pm$ 19.3	25.85 $\pm$ 19.8	.77
Inactivity, mean $\pm$ SD, h/wk	108.77 $\pm$ 44.5	113.91 $\pm$ 50.1	.14
Television, mean $\pm$ SD, h per weekday	2.80 $\pm$ 1.5	2.87 $\pm$ 1.6	.49
Television, mean $\pm$ SD, h per weekend	3.34 $\pm$ 1.57	3.31 $\pm$ 1.6	.75
Body dissatisfaction, mean $\pm$ SD, raw score	9.19 $\pm$ 7.8	9.04 $\pm$ 7.6	.74

N = 1349.

were demonstrated to yield comparable results,²³ GEE was used to model continuous outcomes (eg, BMI z score). These models included race/ethnicity, gender, age, randomization pair, weight status at baseline, and baseline measures of the dependent variable. We note also that, because the unit of randomization and intervention was the school, we also implemented the approach suggested by Donner and Klar²⁴ to compare proportions (eg, of subjects who become obese). This approach uses a paired *t* test to compare the mean of the binary (for proportions) or continuous variables. This approach can work well even for a sample size of 5 pairs.²⁴

To account for attrition at the student level, we imputed missing data at year 2 using the multiple imputation (MI) procedure with the Markov chain Monte Carlo algorithm.²⁵ Although the more conventional intent-to-treat analyses fill in a single value for each missing value, the MI procedure uses information obtained from an individual (eg, demographics, baseline values, intervention condition, etc) to replace each missing value with a set of plausible values that incorporate uncertainty about the right value to impute. Plausible values are then integrated into a single data set using the MIANALYZE procedure in SAS (SAS Institute, Inc, Cary, NC). The MI procedure is superior to the more conventional intent-to-treat analyses, because it produces estimates that are consistent, asymptotically efficient, and asymptotically normal.²⁶ Convergence was assessed via time series and autocorrelation plots. In addition, to assess the consistency of our findings, data were analyzed using the more

conventional baseline carried forward and last observation carried forward methods.

RESULTS

Student and Teacher Participation

The consent rate across the 10 schools was 69.5% $\pm$ 15.4%, with no significant difference between control (67.7% $\pm$ 18.5%) and intervention (71.4% $\pm$ 13.5%) schools. There was no attrition at the school level. Among the 1349 students assessed at baseline, 921 (68.3%) (510 intervention and 411 control) were reassessed at year 1 and 844 (62.6%; 479 intervention and 365 control) were reassessed at year 2. Attrition rates did not differ between intervention and control schools at 1 (31.9% vs 31.5%) or 2 years (36.0% vs 39.2%). The reasons for attrition at 2 years were transfer (95.4%), repeated absences (3.6%), and refusals (1.0%). The analyses that accounted for attrition (MI, baseline carried forward, and last observation carried forward) did not differ from the analyses using complete data. Thus, the results obtained from participants whose data we had at the relevant assessment points (ie, baseline and year 2) are reported here. In addition, the results obtained from the paired *t* tests and GEE analyses were similar, so the GEE results are reported here.

With respect to implementation of the intervention, teachers and support staff participated in an average of 10.4 $\pm$ 2.9 and 8.4 $\pm$ 2.2 hours of training, respectively, during the first and second years of the intervention. Teachers and support staff, respectively, provided an

TABLE 2 Prevalence, Incidence and Remission of Overweight and Obesity at 2 Years

Measure	Sample, <i>n</i>	Baseline, <i>n</i> (%) ^a	Follow-up, <i>n</i> (%) ^a	Unadjusted Change	Adjusted Odds (95% CI) ^b	<i>P</i>
Overweight						
Prevalence						
Control	365	58 (15.89)	73 (20.00)	4.11	1.00	
Intervention	479	78 (16.28)	70 (14.61)	−1.67	0.65 (0.54–0.79)	<.001
Incidence						
Control	208	—	31 (14.90)	14.90	1.00	
Intervention	268	—	20 (7.46)	7.46	0.67 (0.47–0.96)	.03
Remission						
Control	144	—	11 (7.64)	−7.64	1.00	
Intervention	206	—	22 (10.68)	−10.68	1.34 (0.71–2.54)	.37
Obese						
Prevalence						
Control	365	86 (23.56)	91 (24.93)	1.37	1.00	
Intervention	479	128 (26.72)	134 (27.97)	1.25	1.09 (0.85–1.40)	.48
Incidence						
Control	266	—	17 (6.39)	6.39	1.00	
Intervention	346	—	20 (5.78)	5.78	1.00 (0.66–1.52)	.99
Remission						
Control	86	—	12 (13.95)	−13.95	1.00	
Intervention	128	—	14 (10.94)	−10.94	0.84 (0.48–1.46)	.54

N = 844 (individuals with data at baseline and year 2). Models predicting prevalence also controlled for baseline prevalence. Sample sizes for prevalence included all 844 of the participant, whereas sample sizes for incidence and remission were dependent on initial weight status (eg, incidence of overweight was based only on individuals who were normal weight at baseline, whereas remission of obesity was considered using only those individuals who were obese at baseline). — indicates no data available.

^a Data are unadjusted percentages.

^b Odds were adjusted for race/ethnicity, gender, age, and an indicator of the randomization pair.

average of 48.0 ± 27.1 and 44.0 ± 18.3 hours of nutrition education during each year of the intervention.

Student Characteristics at Baseline

Baseline characteristics of the students are shown in Table 1. Among the 1388 students who provided parental consent and child assent, 1349 were assessed at baseline. The sample consisted of 53.7% females. Participants had (mean $\pm$ SD) an age of 11.2 ± 1.0 years, BMI of 20.9 ± 5.1 kg/m², and BMI *z* score of 0.7 ± 1.0 . More than 40% (40.7%) were overweight or obese (≥ 85 th percentile), and nearly a quarter (23.8%) were obese (≥ 95 th percentile). Black children composed nearly half of the sample. There were no significant differences between control and intervention groups on any variable at baseline except for race/ethnicity (see Table 1). There were more Hispanic/Latino students in the intervention group (22.4%) than there were in the control group (5.8%; $P < .001$). To account for these differences at baseline, race/ethnicity was controlled for in subsequent analyses.

Primary Outcome

Incidence of Overweight and Obesity

Significantly fewer children in the intervention schools (7.5%) than in the control schools (14.9%) became overweight after 2 years (unadjusted means). After controlling for gender, race/ethnicity, and age, the predicted odds of incidence of overweight were $\sim 33\%$ lower for the intervention group (odds ratio [OR]: 0.67; 95% confidence interval [CI]: 0.47–0.96; $P < .05$). By contrast,

there were no differences between intervention and controls schools in the incidence of obesity (see Table 2). At 2 years, there were no interaction effects between the intervention and race/ethnicity, gender, or age on obesity incidence. After collapsing the overweight and obese weight categories (≥ 85 th percentile), the predicted odds of incidence of overweight or obesity were $\sim 15\%$ lower for the intervention group (OR: 0.85; 95% CI: 0.74 to 0.99; $P < .05$).

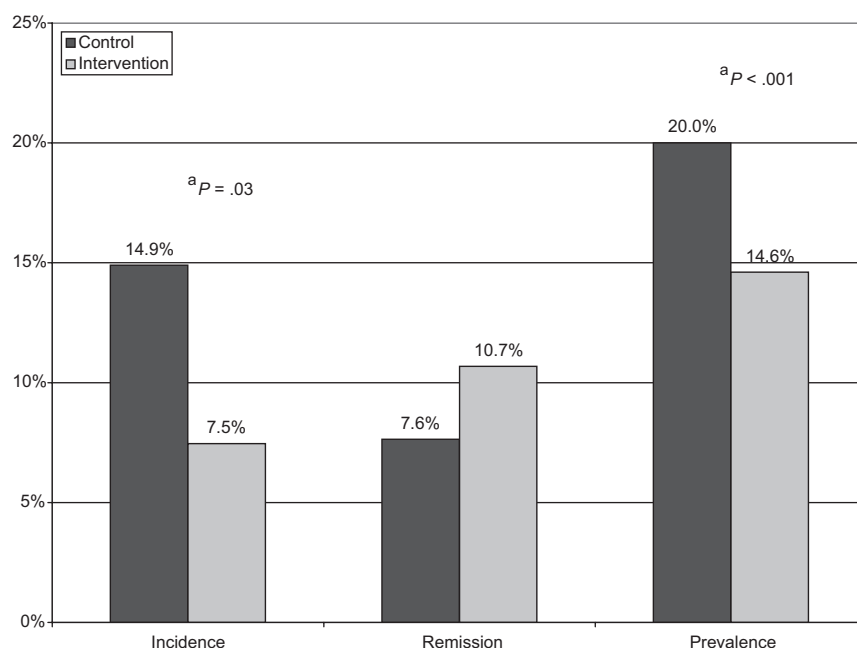
Secondary Outcomes

Prevalence of Overweight and Obesity

After 2 years, the unadjusted prevalence of overweight had decreased by 10.3% in intervention schools and had increased by 25.9% in control schools. After controlling for gender, race/ethnicity, age, and baseline prevalence, the predicted odds of overweight prevalence were 35% lower for the intervention group (OR: 0.65; 95% CI: 0.54 to 0.79; $P < .0001$). In addition to the main effect of the intervention, the intervention's effect on the prevalence of overweight was particularly effective for black students (OR: 0.59; 95% CI: 0.38 to 0.92; $P < .05$). Thus, after controlling for gender, age, and baseline prevalence, treated black students in the intervention schools were 41% less likely to be overweight than those in the control schools after 2 years. By contrast, there were no interaction effects between the intervention and gender or age on the prevalence of overweight. After 2 years, there were no differences between intervention and control schools in the prevalence of obesity (see Table 2 and Fig 1). After collapsing the overweight and obese

FIGURE 1

Unadjusted incidence, remission, and prevalence of overweight (85.0th–94.9th percentiles) at 2 years. ^a Statistically significant differences between the intervention and control schools after controlling for race/ethnicity, gender, age, and baseline prevalence for the prevalence outcome.



weight categories (≥ 85 th percentile), there was no statistically significant difference between the intervention and control schools in the prevalence of overweight or obesity ($P = .07$).

Remission of Overweight and Obesity

After 2 years, there were no differences between intervention (10.7%) and control (7.6%) schools ($P = .40$) with respect to the remission of overweight. Similarly, there were no differences between intervention (10.9%) and control (14.0%) schools ($P = .50$) in the remission rates of obesity (see Table 2). After collapsing the overweight and obese weight categories (≥ 85 th percentile), the predicted odds of remission of overweight or obesity were $\sim 32\%$ higher for the intervention group (OR: 1.32; 95% CI: 1.09 to 1.60; $P < .01$).

Independent of any intervention effect, there was a main effect of age for the prevalence (OR: 0.73; 95% CI: 0.56 to 0.94; $P < .05$), the incidence (OR: 0.73; 95% CI: 0.54 to 0.99; $P < .05$), and the remission (OR: 1.46; 95% CI: 1.07 to 1.99; $P < .05$) of obesity over 2 years. Thus, older children were less likely to be obese or become obese and more likely to remit after 2 years. There were no main effects for the prevalence, incidence, and remission of overweight. There were no differences between groups with respect to changes in BMI ($P = .71$) or BMI z score ($P = .80$).

Dietary Intake and Physical Activity

Students in both intervention and control schools showed similar decreases in self-reported consumption of energy, fat, and fruits and vegetable over 2 years (Table 3). Decreases in self-reported amounts of physical activity were reported by students at intervention and control schools, also with no differences between the 2 groups.

Sedentary Behavior

After 2 years, the unadjusted hours of total inactivity increased by $\sim 3\%$ in the control group and decreased by $\sim 9\%$ in the intervention group. After controlling for gender, race/ethnicity, age, and baseline inactivity, inactivity was 4% lower in the intervention group than in the control group (OR: 0.96; 95% CI: 0.94 to 0.99; $P < .01$) after 2 years. There were no interaction effects between the intervention and race/ethnicity, gender, or age on the level of inactivity.

Similarly, after 2 years, unadjusted weekday television watching increased by $\sim 7.5\%$ in the control group and decreased by $\sim 1\%$ in the intervention group. After controlling for gender, race/ethnicity, age, and baseline television viewing, weekday television watching was 5% lower in the intervention group than in the control group (OR: 0.95; 95% CI: 0.93 to 0.97; $P < .0001$) after 2 years. There were no interaction effects between the intervention and race/ethnicity, gender, or age on television watching.

Potential Adverse Effects

The intervention showed no evidence of an adverse impact with respect to a worsening body image or changes in the incidence, remission, and prevalence of underweight. Both groups showed comparable, minimal changes on the EDI-2 body dissatisfaction subscale (see Table 3). Similarly, at year 2, the same numbers of children were underweight (0.63%, 2.20%) and moved from normal weight to underweight (1.50%, 2.90%) between the intervention and control groups, respectively. Moreover, the same number of children moved from underweight to normal weight (40.00%, 38.50%) for the intervention and control schools, respectively.

TABLE 3 Secondary Outcomes at 2 Years

Measure	Sample, <i>n</i>	Baseline ^a	Follow-up ^a	Unadjusted Change	Adjusted Difference (95% CI) ^b	<i>P</i>
BMI						
Control	364	20.76	22.86	2.10	−0.04 (−0.27–0.19)	.71
Intervention	479	21.07	23.06	1.99		
BMI <i>z</i> score						
Control	364	0.66	0.76	0.10	−0.01 (−0.08–0.06)	.80
Intervention	479	0.73	0.80	0.07		
Total energy, kJ/d						
Control	331	12900.59	10154.13	−2764.46	−104.27 (−234.28–25.73)	.12
Intervention	437	13764.37	10019.10	−3745.26		
Total fat, g/d						
Control	332	109.63	83.88	−25.75	−3.78 (−8.59–1.02)	.12
Intervention	437	116.68	82.63	−34.05		
Fruits and vegetables, <i>n</i> per day						
Control	333	5.33	4.28	−1.05	−0.04 (−0.37–0.30)	.82
Intervention	441	5.26	4.17	−1.09		
Total activity, h/wk						
Control	335	25.17	20.62	−4.55	0.30 (−0.40–1.00)	.40
Intervention	416	25.03	21.28	−3.75		
Body dissatisfaction (raw)						
Control	323	8.98	9.53	0.55	−0.14 (−0.73–0.45)	.64
Intervention	421	8.87	9.20	0.33		
Count variables ^c						
Total inactivity, h/wk						
Control	210	105.45	108.93	3.48	1.00	
Intervention	269	115.21	104.42	−10.79	0.96 (0.94–0.99)	.005
Total television, hours per weekday						
Control	315	2.81	3.02	0.21	1.00	
Intervention	390	2.92	2.89	−0.03	0.95 (0.93–0.98)	<.001
Total television, hours per weekend						
Control	300	3.41	3.32	−0.09	1.00	
Intervention	372	3.28	3.26	−0.02	0.97 (0.89–1.05)	.39

N = 844.

^a Data are unadjusted means.

^b Differences between the intervention and control groups were adjusted for race/ethnicity, gender, age, randomization pair, weight status at baseline, and baseline measures of the dependent variable.

^c Count variables were modeled as Poisson distributions with adjusted change interpreted as ORs.

DISCUSSION

These data demonstrate that implementation of the multicomponent SNPI was associated with a substantial (~50%) and statistically significant decrease in the incidence of overweight. Compared with the 15% of children who became overweight in control schools, only 7.5% became overweight in intervention schools. Although a 50.0% reduction in incidence is impressive, the 7.5% increase over 2 years suggests that stronger or additional interventions are needed. These may include environments that are within schools (eg, physical education classes or more aggressive nutrition policies) or more proximal to schools (eg, local corner stores or after-school feeding programs). The intervention also had positive effects on the overall prevalence of overweight. Among intervention schools, prevalence decreased by 10.3% compared with a 25.9% increase in control schools. The intervention was even more effective for reducing the prevalence of overweight among black students. Treated black students were 41% less likely than nontreated black children to be overweight after 2 years compared with 35% less likely in the entire group. This is important to note given the increased

prevalence of overweight among black children.¹¹ The intervention effect on overweight may have been mediated by changes in sedentary behavior. Other effective school-based interventions have found similar results,^{4,5} suggesting that decreasing sedentary behavior may be a fruitful target. The self-reported nature of our activity data, however, makes this conclusion less certain.

In contrast to the effect on overweight, the intervention had no effect at the upper end of the BMI distribution, that is, on the incidence, prevalence, or remission of obesity. Progression to or remission from ≥95th percentile may be more likely to result from targeted and/or clinic-based programs than from untargeted approaches, such as the SNPI. The lack of an effect on BMI *z* score was not surprising. A reduction in BMI *z* score is not desired among those in the normal or underweight categories who composed ~60% of the sample at baseline. BMI *z* score is probably a more appropriate metric to use in clinic-based studies of those who are already overweight or obese.

There is some concern that school-wide obesity prevention programs may heighten body image concerns among youth and/or create more underweight children.

Neither of these concerns was supported by our data. There were no differences between intervention and control groups in body image dissatisfaction or in the incidence, prevalence, or remission of underweight. Although the purpose of the intervention was the primary prevention of overweight and obesity, the emphasis was on eating well and moving more rather than weight control. This emphasis may have mitigated any potential adverse effects.

The use of self-reported measures of diet and physical activity makes any conclusions about mediators of the intervention effect tenuous. For example, it is unlikely that differences in energy intake had no role in mediating the intervention effects, but there were no group differences in self-reported energy intake. Children reported decreases of 2520 to 3780 kJ per day (600–900 kcal per day) raising questions about the validity of the self-reported intake data. Future studies would be improved by using accelerometry or doubly labeled water to more effectively look at mechanisms. Future studies would also be improved by a large number of schools and measures in addition to BMI (eg, waist circumference, glucose, and insulin).^{27,28}

Despite the randomized nature of the study, our sample of 10 schools limited our ability to create identically equivalent groups. Although the groups only differed with respect to race/ethnicity, which was included in all of the statistical models, it is possible that the intervention and control schools differed on unmeasured characteristics that were related to our outcome. To ensure more complete randomization, future studies should consider either increasing the number of schools or matching schools on additional variables (eg, race/ethnicity).

CONCLUSIONS

In conclusion, our data suggest that a multicomponent school-based intervention can be effective in curbing the development of overweight among children in grades 4 through 6. It is of note that the intervention was implemented in urban public schools with a high proportion of children eligible for free and reduced-priced school meals. A troubling observation within these data are that, in the absence of any intervention (ie, control schools), 15% of the children who were not overweight in grades 4 to 6 became overweight over the next 2 years. Among those who were not obese, 6% became obese within 2 years. This secular trend has significant public health implications. According to the 2000 census, there are 20 528 072 children aged 10 to 14 years, which is the age range of this study. According to our incidence findings, ~ 3 million ($0.149 \times 20\,528\,072 = 3\,058\,683$) children will become overweight, and ~ 1.3 million ($0.0639 \times 20\,528\,072 = 1\,311\,744$) will become obese over 2 years. Given that there was still a 7% incidence of new cases of overweight even in the intervention schools, there is much room for improvement in the effect, dose, and range of interventions. Future directions might include a focus on other aspects of the school environment (eg, physical education classes) or on environments beyond the school (eg, corner stores

and homes). Finally, given the already high prevalence of children above the 85th percentile in grades 4 through 6 (41.7%), prevention programs should begin earlier than fourth grade.

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