



OKLAHOMA FARM-TO-SCHOOL



RESOURCE GUIDE FOR **FOOD SERVICE**

THE KERR CENTER FOR SUSTAINABLE AGRICULTURE
Serving Oklahoma's Farmers and Ranchers since 1965



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Oklahoma Farm-to-School Resource Guide For Food Service

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Special Thanks

Oklahoma Ag in the Classroom
Oklahoma State Department of Education
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Oklahoma Department of Environmental Quality
Oklahoma Department of Human Services
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Center for Ecoliteracy
Community Food Security Coalition
National Farm to School Program
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Oklahoma Farm-to-School Resource Guide for Food Service Managers

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INTRODUCTION

Farmers and schools have several things in common. They both plant seeds and nurture growth, and with some patience and hard work, can reap bountiful harvests. They both rely on experience gained from years past, on sufficient planning and on consistent effort to ensure the greatest possible yields. The most successful ones are those able to adapt to changing environments, creating practical and innovative solutions as new problems and opportunities arise.

Oklahoma has many examples of successful farmers and schools throughout our state. However, both farmers and schools are facing some serious challenges today and in the years to come.

For farmers, rising fuel and input costs combined with marginal commodity prices will likely continue to limit profitability, especially for farms raising crops and livestock entering the global marketplace. In Oklahoma, the average annual net farm income for all farms is \$8,220, and sixty-three percent of our farms have annual sales less than \$10,000.¹ Yet we import over 90% of the fresh produce items which are grown commercially in our state.² Equally concerning, nearly two-thirds of our state's farmers are over the age of 54, and only six percent are below the age of 35.

Meanwhile, schools are filled with children and adolescents facing obesity and chronic health problems at rates never seen before. The U.S. Centers for Disease Control estimates that one in three Americans born in 2000 will develop diabetes sometime during their lifetime.

Besides not getting enough physical activity, most public health authorities agree that children (and adults) are eating too many foods and drinks high in fat and sugar and not nearly enough fruits and vegetables. In Oklahoma, only 14% of our high school students eat five or more servings of fruits and vegetables per day.³

So how do we help kids choose to eat more nutritious foods? A growing number of schools are finding that serving foods fresh from local farms and providing students with meaningful hands-on experiences can go a long way towards improving healthy food choices. These Farm-to-School initiatives are demonstrating that kids will eat more nutritiously when offered a variety of fresh, high quality foods. In many of these projects, salad bars are commonly used for featuring locally grown fruits and vegetables.

Increasing school cafeteria use of locally produced foods can also have numerous economic benefits as farmers gain access to new markets, and food dollars are kept closer to home. Many farm-to-school advocates also consider local purchasing as a way to improve food security and in-turn, homeland security, by shortening the distance food travels and reducing dependence upon foods coming far from home.

Oklahoma currently has 540 school districts, with 1844 schools serving students more than 167,000 breakfasts and over 375,000 lunches every day of the school year. Most schools offer one serving of fruit at breakfast and two or more servings of fruits and/or vegetables at lunch. If half the schools in our state featured one serving of Oklahoma grown canteloupes at one meal, on one day of the year, this would require nearly 5000 melons. Or, one serving of Oklahoma grown

tomatoes for one meal in half our schools would likewise require over 18,000 pounds of fresh, whole tomatoes.⁴

While much of the school year doesn't coincide with normal harvest periods for many crops, a growing demand by schools for locally produced items will encourage growers and researchers to look at non-traditional planting dates and season extension methods. Increased demand by schools will also foster greater production of crops which do overlap with the school year, such as lettuce, tomatoes, onions and cucumbers.

Farm-to-school efforts are taking place in over 400 school districts in at least 23 states, including Oklahoma. Our state first began looking into the matter in 2002, when the Oklahoma Food Policy Council surveyed all 545 school food service directors in the state. Over two-thirds of the respondents expressed interest in purchasing locally produced foods.

Following the encouraging survey results, the Food Policy Council helped implement pilot programs in 2004 and 2005, featuring seedless watermelons grown near Hinton, Oklahoma and served at nearly 150 schools in six districts. Agency partnerships between the State Departments of Human Services; Education; and Agriculture Food and Forestry were vital to the pilot's success. The USDA and the U.S. Department of Defense also played important roles.

The successful pilot led to the introduction and passage in 2006 of state legislation titled the "Oklahoma Farm to School Program Act." The Act formally establishes the Oklahoma Farm to School Program, designating the Oklahoma Department of Agriculture, Food and Forestry as the lead agency. As such, it shall provide leadership, conduct workshops and offer technical assistance to farmers, food service directors, processors and distributors, emphasizing the purchase of locally and regionally produced foods. The Department is also to establish a Farm to School Program website for assisting schools and farmers in the coordination of fresh food procurement.

The Oklahoma legislation also recognizes that successful farm to school programs often feature hands-on learning opportunities for students. These include farm visits, tasting and cooking demonstrations, school gardens and lessons for integrating nutrition and agriculture education into school curricula. These innovative approaches help give youth a new understanding of food and place, as they become more connected with the sources of their nourishment.

This publication is therefore intended to give food service managers a solid starting point for building relationships with farmers, both as suppliers and as mutual partners working to improve child nutrition. Most of the information contained in this guide is applicable for any level of farm-to-school activity, from procuring one local item for a special event to stocking a daily salad bar with fresh local produce. With the wide diversity of school districts, farms and crops in our state, it is likely that many different models will emerge to best address the needs of our students, our schools and our farmers.

¹ U.S. Department of Agriculture. *2002 Census of Agriculture*. National Agricultural Statistics Service.

² USDA. 2005. Food Consumption (per capita) Data System. Economic Research Service.

³ Centers for Disease Control. 2003. Youth Risk Behavior Surveillance System – Oklahoma.

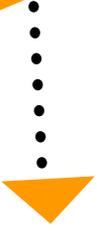
⁴ USDA. 2001. *Food Buying Guide for Child Nutrition Programs*. Food and Nutrition Service. (1 serving = ¼ cup)

Section 1

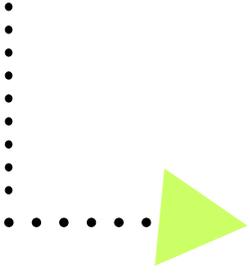
The ABC's of Farm-to-School

- Connecting Local Farmers to Local Schools
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Farm-to-School



Connecting Local Farmers to Local Schools



Sandy Garrett
State Superintendent of Public Instruction
Oklahoma State Department of Education
Child Nutrition Programs



Farm-to-School

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What is Farm-to-School?

Farm-to-School partners local farmers with local schools. Farm-to-School programs may include:

- Child Nutrition Programs purchasing products from local farmers for school meals
- School gardens
- Healthy Eating and Nutrition Education
- Farm/Farmer Visits
- Agriculture-related lessons and activities

Can Oklahoma schools purchase food items from local farmers to serve in school meals?

Yes, schools may purchase food from local farmers or farmers markets. Section 9 of the National School Lunch Act encourages institutions participating in the National School Lunch Program and the School Breakfast Program to purchase locally produced food.

Do farmers have to be inspected or licensed?

The Oklahoma State Department of Health does **NOT** require any type of inspection or licensing as long as the food items are purchased directly from **an individual farmer** and are whole and intact (not processed). In addition, the food item purchased must not be considered a *potentially hazardous food* as defined by Oklahoma State Department of Health Food Service Establishment Regulations, Chapter 256.

What is a potentially hazardous food?

Potentially hazardous food means a food that is natural or synthetic and requires temperature control because it is in a form capable of supporting the rapid and progressive growth of infectious or toxigenic microorganisms, the growth and toxic production of **Clostridium botulinum**, or, in raw shell eggs, the growth of **Salmonella enteritidis**. Potentially hazardous foods include, but are not limited to, animal foods (a food of animal origin) that is raw or heat-treated, a food of plant origin that is heat-treated or consists of raw seed sprouts, cut melons, and garlic and oil mixtures that are not modified in a way that results in mixtures that do not support growth. Potentially hazardous food does not include air-cooled hard-boiled eggs with the shell intact; a food with a water activity of 0.85 or less; a food with a pH level of 4.6 or below when measured at 75° F; a food in an unopened, hermetically sealed container; a food for which laboratory evidence demonstrates that the rapid and progressive growth of infectious or toxigenic microorganisms or the growth of **S. enteritidis** or **C. botulinum** cannot occur; or a food that may contain infectious or toxigenic microorganisms or chemical or physical contaminants at a level sufficient to cause illness, but that does not support the rapid and progressive growth of infectious or toxigenic microorganisms.

What is a farmer's market?

According to the Oklahoma State Department of Health, **farmer's market** means a designated area in which farmers, growers, or producers from a defined region gather on a regularly scheduled basis to sell at retail nonpotentially hazardous farm food products and whole shell eggs to the public. A portion of the raw food ingredients used by the individual vendor to produce a product must have been grown or raised by the vendor. The individual vendors wishing to process food as defined by Chapter 260 of the regulations must obtain a state food processor's license. Farmer's markets must be registered with the Oklahoma Department of Agriculture Food and Forestry and comply with the *Food Service Establishment Regulations*, Chapter 256, and/or *Good Manufacturing Practice*, Chapter 260. This definition does not include individual farmers who grow and sell unprocessed fruit and/or vegetables from the farm, roadside, or truck. **Any vendors who prepare or sell any potentially hazardous foods at the farmer's markets must abide by all applicable sections of Chapter 256 of the regulations, including acquiring a license from the department.**

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Can schools purchase eggs from local farmers/producers?

Yes; however, eggs are considered to be a potentially hazardous food item. The egg producer must be licensed and inspected by the Oklahoma Department of Agriculture, Food, and Forestry. In addition, the egg producer must be inspected by the Oklahoma State Department of Health.

How does my school start purchasing food for school meals from local farmers?

Farm-to-school purchases must follow federal procurement regulations. Schools using small purchase procedures should follow these steps:

1. Using the *The Oklahoma Food Connection 2003* developed by the Oklahoma Food Policy Council/Kerr Center for Sustainable Agriculture as a reference, contact a few farmers to inquire about the availability of specific product items for use in your Child Nutrition Programs (CNP).
2. Request from each farmer a list of produce grown, showing typical periods of availability during the school year. Many crops normally harvested in the spring and summer months can also be grown in Oklahoma for harvest in the fall and early winter. Just ask the farmers to indicate which produce could be available during the periods August—December, December—March, March—May, and also May—August if you have summer feeding programs.
3. Upon reviewing the lists of available produce, estimate the approximate volumes used weekly for each item in which you are interested.
4. Arrange appointments to meet with farmers to gather information about possible quantities available, grading, packaging, delivery, pricing, and payment. If the school district's anticipated annual purchase of a particular product will be less than the applicable small purchase threshold, the school can use these simplified procedures and contact a number of local farmers. The federal small purchase threshold is currently set at \$100,000.

To facilitate purchase of locally grown produce, schools can: identify and encourage local farmers to submit price quotes; look into alternative pack sizes and distribution methods that reflect product availability, using pricing structures such as fixed delivery charges with product prices that respond to the current market value; and explore new and different products that are available through local farms.

Schools also need to develop specifications that reflect the characteristics of the products they seek. For example, local farmers grow a specific lettuce variety that students prefer but that the school cannot get through its broker or distributor. The school can write its specification requiring this lettuce variety. However, just writing the specification alone will not be adequate to ensure local farm participation. The school must have *laid the groundwork*; i.e., identifying and encouraging local farm participation for the procurement to be successful. To ensure the freshest product possible, consider using a statement such as “...days from harvest...” in your product specifications.

5. Obtain and document price quotes for produce items as you specify in order to get the freshest product at the best price.

Farm-to-School

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Why is locally grown produce better?

Because locally grown produce is likely harvested at peak ripeness and brought to the consumer in the shortest time possible, it is often of the highest quality—attractive to the eye, with pleasant odor, flavor, texture and feel—and if handled properly, with high nutritive value. People are more likely to consume fresh fruits and vegetables when they are of high quality.

How can farm-to-school work with Oklahoma's growing season?

Oklahoma farmers cannot supply all the fresh fruits and vegetables schools use. We do not have the climate to grow some crops (oranges, for example) that schools want, but many other crops that schools use or could use are already grown commercially in the state and can be harvested in the spring or fall. The seasons for some crops can be extended by the use of greenhouses or under plastic.

What are the benefits of Farm-to-School?

- Encourages student to eat more fruits and vegetables
- Improves nutrition
- Teaches students about Oklahoma Agriculture
- Supports family farms and rural communities
- Provides an additional source of food for Child Nutrition Programs
- Increases our Nation's Food Security

Sources

Eat Smart-Farm Fresh! A Guide to Buying and Serving Locally-Grown Produce in School Meals. United State Department of Agriculture, Food and Nutrition Service, 2005.

Farm-to-School: FAQs, Kerr Center for Sustainable Agriculture, 2005.

The Oklahoma Farm-to-School Report, Oklahoma Food Policy Council/Kerr Center for Sustainable Agriculture, 2003.

Food Service Establishment Regulations, Chapter 256. Oklahoma State Department of Health, 2005.

The Oklahoma Food Connection: A Directory of Agricultural Producers, Crops, and Institutional Buyers, Oklahoma Food Policy Council/Kerr Center for Sustainable Agriculture, 2003.

**For more information contact:
Child Nutrition Programs
Oklahoma State Department of Education
Phone (405) 521-3327
<www.sde.state.ok.us>**

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2006 LEGISLATION

SANDY GARRETT
STATE SUPERINTENDENT OF PUBLIC INSTRUCTION
STATE OF OKLAHOMA
June 15, 2006

HB 2655 – Oklahoma Farm to School Program Act

Dear Superintendent:

House Bill 2655 creates the “Oklahoma Farm to School Program Act,” which will become effective November 1, 2006. This Act emphasizes the purchase of locally and regionally produced food and will enable schools to provide fresh, minimally processed farm commodities in school meals and snacks. It is the intent of the legislature that school districts encourage the implementation of the Oklahoma Farm to School Program in order to help children develop healthy eating habits; improve Oklahoma farmers’ incomes; and, provide direct access to markets.

The benefits of the program include activities that (1) provide students with hands-on learning opportunities, such as farm visits, cooking demonstrations, school gardening and composting programs, and (2) integrate nutrition and agriculture education into school curricula.

The Oklahoma Department of Agriculture, Food, and Forestry, the lead agency, is to provide leadership, conduct workshops and training sessions, and establish a Web site. The program will also require the resources, expertise, collaboration, and support of a variety of other state agencies, including the State Department of Education, the Department of Human Services, and the State Department of Health.

A copy of House Bill 2655 is attached for your review. If you have any questions related to the bill, please call Ms. Dee Baker, Executive Director, Child Nutrition Programs, at (405) 521-3327, or Mr. Tom White, Assistant State Superintendent, Federal Fiscal Services, at (405) 521-4893.

Sincerely,

A handwritten signature in cursive script that reads "Sandy".

Sandy Garrett
State Superintendent

pj

Attachment: House Bill 2655

OKLAHOMA STATE DEPARTMENT OF EDUCATION
2500 NORTH LINCOLN BOULEVARD, OKLAHOMA CITY, OK 73105-4599
(405) 521-3301, FAX: (405) 521-6205

<http://sde.state.ok.us>

FIRST IN THE TWENTY-FIRST

recycled paper

An Act

ENROLLED HOUSE
BILL NO. 2655

By: Winchester, Lindley,
Shelton, Auffet, Dorman,
McMullen, Pruett, Sherrer,
Shoemake, Walker, Askins
and Shumate of the House

and

Lawler of the Senate

An Act relating to agriculture; creating the Oklahoma Farm to School Program Act; providing short title; stating intent, purposes and goals; recognizing need for collaboration; creating the Oklahoma Farm to School Program; designating the Oklahoma Department of Agriculture, Food, and Forestry as lead agency; providing for employment of a director; providing for staffing; stating duties of the director; requiring establishment of web site; requiring a link to the web site on certain home pages; stating purpose of the web site; authorizing the Department to promulgate rules; providing for codification; and providing an effective date.

BE IT ENACTED BY THE PEOPLE OF THE STATE OF OKLAHOMA:

SECTION 1. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 5-60.1 of Title 2, unless there is created a duplication in numbering, reads as follows:

This act shall be known and may be cited as the "Oklahoma Farm to School Program Act".

SECTION 2. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 5-60.2 of Title 2, unless there is created a duplication in numbering, reads as follows:

A. The Legislature recognizes that:

1. Farm to School Programs link schools and Oklahoma farms in order to provide schools with fresh and minimally processed farm commodities for inclusion in school meals and snacks, to help children develop healthy eating habits, and to improve Oklahoma farmers' incomes and direct access to markets; and

2. The benefits of Farm to School Programs often include activities that provide students with hands-on learning opportunities, such as farm visits, cooking demonstrations, and school gardening and composting programs, and integrate nutrition and agriculture education into school curricula.

B. It is the intent of the Legislature that school districts encourage the implementation of the Oklahoma Farm to School Program, which will emphasize the purchase of locally and regionally produced foods in order to improve child nutrition and strengthen local and regional farm economies.

C. A successful statewide Farm to School Program will require the resources, expertise, and collaboration of a variety of state agencies, including the State Department of Education, the State Department of Health, the Oklahoma Department of Agriculture, Food, and Forestry, the Department of Human Services, and a nonprofit agency that has experience in Farm to School Programs.

SECTION 3. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 5-60.3 of Title 2, unless there is created a duplication in numbering, reads as follows:

A. There is hereby created the Oklahoma Farm to School Program within the Oklahoma Department of Agriculture, Food, and Forestry. The Department shall employ a director to administer and monitor the programs and activities related to the Oklahoma Farm to School Program with the advice of and guidance of a nonprofit food policy council.

B. The following agencies shall make staff available to the Oklahoma Farm to School Program for the purpose of providing professional consultation and staff support to assist the implementation of this act:

1. Oklahoma Department of Agriculture, Food, and Forestry;
2. State Department of Health;
3. State Department of Education; and
4. Department of Human Services.

SECTION 4. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 5-60.4 of Title 2, unless there is created a duplication in numbering, reads as follows:

The duties of the director shall include, but not be limited to:

1. Identifying and promoting the critical components of individual Farm to School Programs and advising the agencies on needed actions and strategies to implement the Oklahoma Farm to School Program;
2. Establishing a partnership with public and nonprofit sources to implement a public engagement campaign and establish a structure to facilitate communication between farmers and school districts;
3. Providing leadership at the state level to encourage school districts to develop and improve school nutrition plans using locally grown farm-fresh products;
4. Conducting workshops, training sessions, and technical assistance to school food services directors, personnel, farmers, and produce distributors and processors regarding the demand for and the availability of Oklahoma farm products; and

5. Seeking grants from private donations and other funding sources.

SECTION 5. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 5-60.5 of Title 2, unless there is created a duplication in numbering, reads as follows:

A. The Oklahoma Department of Agriculture, Food, and Forestry shall establish a Farm to School Program web site for the State of Oklahoma. A direct link to the Farm to School Program web site shall be maintained on the home pages of the State of Oklahoma, the State Department of Education, and the Oklahoma Department of Agriculture, Food, and Forestry.

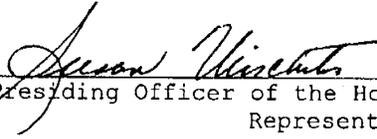
B. The purpose of the Farm to School Program web site shall be to assist schools and farmers in the coordination of fresh food procurement.

SECTION 6. NEW LAW A new section of law to be codified in the Oklahoma Statutes as Section 5-60.6 of Title 2, unless there is created a duplication in numbering, reads as follows:

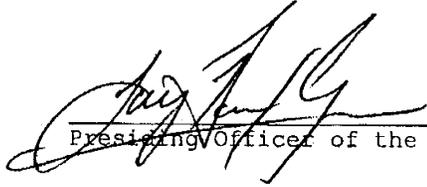
The Oklahoma Department of Agriculture, Food, and Forestry is authorized to promulgate rules as necessary to carry out the provisions of this act.

SECTION 7. This act shall become effective November 1, 2006

Passed the House of Representatives the 22nd day of May, 2006.


Presiding Officer of the House of
Representatives

Passed the Senate the 24th day of May, 2006.


Presiding Officer of the Senate

OFFICE OF THE GOVERNOR

Received by the Governor this 25
day of May, 2006,
at 10:15, o'clock A M.

By: Blain Gaddis

Approved by the Governor of the State of Oklahoma the 7 day of
June 20 06, at 10:28, o'clock A M.


Governor of the State of Oklahoma

OFFICE OF THE SECRETARY OF STATE

Received by the Secretary of State this 7th
day of June, 2006,
at 11:58, o'clock A M.

By: M. Susan Lewis

RECEIVED

JUN 27 2006

CHILD NUTRITION

**OKLAHOMA
STATE
HEALTH
DEPARTMENT**

**CONSUMER
HEALTH
SERVICE**

MEMORANDUM

TO: Dee Baker,
Executive Director of Child Nutrition
Oklahoma Department of Education
2500 N. Lincoln Blvd., Room 310
Oklahoma City, OK 73105 - 4591

FROM: Ted Evans, Chief *JE by John Kutty*
Consumer Health Service
Oklahoma State Department of Health

DATE: June 26, 2006

RE: Fruits and Vegetables

The following is a response to your question: "Can School Districts in the State of Oklahoma buy fruits and vegetables from the producing farmer, even if the producing farmer does not possess a current license to sell food from the Oklahoma State Department of Health?" The answer is yes. The Oklahoma State Department of Health has exempted Oklahoma farmers who grow and sell unprocessed fruits and vegetables from licensure if they meet the following criteria.

GUIDELINES FOR FARMERS SELLING PRODUCE AND FARMERS MARKETS

- (A) Farmers and growers in Oklahoma may sell unprocessed fruits and vegetables without a license from the Oklahoma State Department of Health under the following conditions:

1. The unprocessed fruits and vegetables must have been grown by the seller. The grower can sell only his/her own products.
2. The products must be whole, unprocessed fruits and vegetables.
3. The products can be sold from a roadside stand, truck, or from a farmers market, or other location that would meet minimum standards for the sale of unprocessed food products.
4. Products must be protected from contamination from outside sources such as stagnant water, mishandling, etc. Products should not be stored in contact with the ground or floor, or in dirty or contaminated containers. Spoiled or decomposing fruit and vegetables must be separated from fresh products and disposed of in proper trash containers.
5. Washing and cleaning of unprocessed fruits and vegetables must be done in a manner consistent with Good Manufacturing Practices and with a potable water supply meeting the requirements of the Oklahoma State Department of Health. Wastewater from the cleaning of unprocessed fruits and vegetables must be disposed of in a manner that does not create a nuisance or public health hazard.

(B) A license from the Oklahoma State Department of Health will be required in the following instances:

1. The grower or farmer sells unprocessed fruits and vegetables, which he/she has purchased or consigned, from another grower or other source (public market, etc) or any other products that have not grown by him/her.
2. The grower also sells processed products such as cider, jelly, breads or any other manufactured or processed food products other than whole, unprocessed fruits and vegetables as stated above. All processed or manufactured products must come from a licensed facility meeting the requirements of the Good Manufacturing Practice Regulations.

I hope that his information will help you with your project. If I can be of further assistance, please call or e-mail me at (405) 271-5243 or Tede@health.ok.gov.

TE:vk

Getting Healthy with the Oklahoma Farm-to-School Program

The Oklahoma Farm-to-School Program 2002-2005

The Oklahoma Food Policy Council (OFPC, a joint project of the Kerr Center and the OK Dept. of Agriculture, Food and Forestry). Fifteen Oklahomans representing diverse groups make up the council. Its mission is to look at the entire food system, from farm to table, and recommend comprehensive approaches to improving the system for both farmer and consumer.

The council organized Oklahoma's farm-to-school program in response to its 2002 survey of 638 institutional food service managers (including public schools).

About 2/3 of the managers who replied expressed interest in purchasing locally grown food and identified possible purchases, reasons for wanting to buy locally, as well as barriers to such sales. The findings of the institutional food survey as well as an article about the development of farm-to-school projects across the country were published in 2003 as *The Oklahoma Farm-to-School Report*.

In the survey, food service expressed the need for a list of Oklahoma farmers and produce available. The council met this need with the *Oklahoma Food Connection: A Directory of Agricultural Producers, Crops and Institutional Buyers*.

The directory was distributed to farmers and food service statewide and is online.

In 2004, four school districts (Broken Arrow, Edmond, Shawnee and Tablequah) participated in a pilot project, serving Oklahoma-grown seedless watermelons for lunch during August and September. In conjunction with the watermelon deliveries, the Oklahoma Ag in the Classroom program distributed a "watermelon curriculum," to teach elementary school students about nutrition, food and agriculture.

The watermelons were well-received by students and food service and the program was so popular that in fall 2005 two school districts (Muskogee and Tulsa) were added to the four, tripling the number of melons delivered.

Key to the success of the program has been the partnership with the OK Dept. of Human Services Commodity Distribution and School Nutrition Unit, OSU, the OK Dept of Education Child Nutrition Program, food service directors, Thomas Bros. Produce, the USDA Food and Nutrition Service and the US Dept. of Defense Farm Fresh Program.



Benefits of Farm-to-School Programs for Oklahoma Schoolchildren

Farm-to-school is an exciting, cost-effective approach to helping kids develop healthy eating habits that will last a lifetime.

According to research into existing farm-to-school efforts, students choose significantly more servings of fruits and vegetables when given the choice of high quality, farm-fresh produce.

Other research has shown that kids are more likely to eat fruits and vegetables if they pick, grow or cook it themselves, pointing to the value of school gardens and “kitchen garden” cooking programs. Eating healthy food in school has also been shown to increase concentration and reduce behavioral problems.

Oklahoma farmers produce a variety of fruits, vegetables, nuts, whole grains and dairy products. Farm-to-school programs are a win-win for schools and for family farmers looking to increase sales. A robust farm to school program in the state has the potential to improve the health of Oklahoma’s children and Oklahoma’s farm economy.

The Future of the Oklahoma Farm to School Program

Organizers believe that the farm-to-school program has the potential to expand to include more types of produce, more growers and more schools.

Expanding the program, however, will require significantly more coordination between farmers, distributors and food service directors than has been done until now. Educational outreach to the parties involved, incentives to buy locally, and research into the needs of farmers and food service are also essential to successful expansion of the program. Also important is incorporating creative efforts such as school gardens and food/nutrition/ag lessons into the program.

For more information contact:

Oklahoma Farm-to-School Program
Kerr Center
PO Box 588
Poteau, OK 74953
918.647.9123

Complete information is online at
www.kerrcenter.com



Farm-to-School: FAQs

What is farm-to-school?

Farm-to-school programs feature school purchases of food (usually fresh fruits and vegetables) from local farmers. Nutrition lessons are often coordinated with the fresh produce being served for lunch. Programs can also include Ag-in-the-Classroom curriculum, school gardens, food tastings and cooking classes, and farm/farmer visits, all of which get kids excited about healthy food.

How do farm-to-school programs contribute to children's health?

Farm-to-school programs contribute to children's health by helping kids develop healthy eating habits that will last a lifetime.

According to research into existing farm-to-school efforts, students choose significantly more servings of fruits and vegetables when given the choice of high quality, farm-fresh produce.

When they are well-nourished, children learn better.

Why would farm-to-school be good for kids in Oklahoma?

During the last 30 years in Oklahoma, the percentage of overweight children (ages 6-11) has quadrupled, while adolescent rates have more than doubled. Doctors blame poor eating habits for this "obesity epidemic." High sugar, high fat "fast foods" are being blamed. Obesity can contribute to serious lifelong conditions such as diabetes and heart disease.

While Oklahoma kids are consuming more calories than they need, they are not eating enough servings of fruits and vegetables. Only 15% of Oklahoma adults eat five or more servings of fruits and vegetables per day, ranking the state dead last in the nation.

Because Oklahoma kids eat lunch at school and many eat breakfast there as well, schools have a unique opportunity to improve the nutrition of the children they serve.

Can you really get kids to eat fruits and vegetables?

Several research studies have shown that kids will eat more fruits and vegetables when they have easy access to a variety of high quality fresh items, often on a salad bar where they have a lot of choice. Kids from different socio-economic levels respond similarly.

Research and the experience of educators has also established that kids are more likely to eat fruits and vegetables, especially unfamiliar items, if they participate in fun educational activities featuring these foods.

Are fresh fruits and vegetables more nutritious than frozen or canned?

Fresh fruits and vegetables are highly nutritious. Fresh produce is often highest in key vitamins and minerals.

Nutritionists believe that because fresh produce looks appealing, has an appealing texture, and often tastes much better than processed, that people are more likely to eat it and improve their overall nutrition.

Farm-to-school programs feature locally grown food. What does locally grown mean?

Locally grown usually means grown nearby. Often it includes anything grown in a given state.

Why is locally grown produce better than produce grown elsewhere?

Because locally grown produce is likely harvested at peak ripeness and brought to the consumer in the shortest time possible, it is often of the highest quality--attractive to the eye, with pleasant odor, flavor, texture and feel-- and if handled properly, with high nutritive value. People are more likely to consume fresh fruits and vegetables when they are of high quality.

How are farm-to-school programs good for farmers?

Farm-to-school opens up a large new market for farmers. The potential for significant sales exists: in North Carolina, for example, farmers sold \$500,000 worth of fresh fruits and vegetables to state schools in 2004-2005. In Oklahoma, according to one estimate, farmers could sell \$6 million worth of fruits and vegetables to schools.

How widespread are farm-to-school programs?

Programs exist in 400 school districts in 23 states, including Oklahoma. The Oklahoma Food Policy Council (a joint project of the Kerr Center and the Okla. Dept. of Agriculture) has spearheaded the Oklahoma program. The motto of the Oklahoma farm-to-school program is "growing healthy kids and a healthy rural economy".

Which Oklahoma schools have a farm-to-school program?

Four school districts (Broken Arrow, Edmond, Shawnee, and Tahlequah) participated in a pilot project in the 2004/2005 school year. In 2005/2006, Tulsa and Muskogee were added to the four. The districts bought Oklahoma-grown seedless watermelons and served them during the first few weeks of school. The Oklahoma Ag-in-the-Classroom program created a fun and educational "watermelon curriculum" to be used in conjunction with the lunchtime watermelon.

Was the Oklahoma pilot program successful?

School food service directors in the six districts reported that the melons were of high quality-- "The best she ever ate," was how Broken Arrow food service director Jill Poole put it. The melons were delivered in good condition, in a timely manner.

By all accounts, the melons were extremely popular with kids, teachers, and food service. Several schools received extensive positive media coverage for the farm-to-school watermelons.

Are other Oklahoma schools interested in farm-to-school?

In 2002, the Oklahoma Food Policy Council devised and mailed out the "Oklahoma Institutional Food Service Survey" to 545 schools in the state. About 72% of the food service directors contacted replied, a very high response rate to a mailed survey.

Of those, over 2/3 indicated they would make local purchases provided "competitive price and quality and an available local source." More than half said they would consider local purchases if they could purchase small quantities, and more than half wanted to make contact with local food sources.

Of the one-fourth of respondents who had made local purchases, over four-fifths said they would be willing to make them again.

How can people find out more about the Oklahoma farm-to-school program?

Extensive information is available at the Kerr Center website or by calling the Kerr Center. The Oklahoma Food Connection, a directory of farmers, school food service, and available crops is also online at www.kerrcenter.com

How do farm-to-school programs fit into the school lunch program?

Locally grown food can be offered as part of a hot lunch, breakfast, as snacks or in some schools is offered on a salad bar.

How does the school lunch program work?

The school lunch program is federally funded. School districts are reimbursed for every school meal they sell. Reimbursements fall into three categories-free, reduced, and full price.

Where do schools get the money to buy locally grown produce as part of a farm-to-school program?

School food service directors can purchase locally grown produce with the same federal reimbursement money that they use to buy all their food items. Schools also get a small amount of money to purchase locally-grown fresh fruits and vegetables through a special Dept. of Defense/USDA partnership that is part of the school commodity program (This program is currently being reorganized and may not be available in the future).

How did the Oklahoma program work?

The watermelons were purchased using commodity funds through the USDA/Dept. of Defense (DoD) Farm-to-School program. DoD worked with an Oklahoma farmer who is part of their extensive produce procurement network. The participating schools placed their orders through the Dept. of Human Service Commodity Division. The orders went to DoD, which found the grower, and guaranteed the quality and price. Thomas Bros. Produce, a produce vendor who already sells to many schools in Oklahoma, delivered the melons.

Is the DoD program the only avenue schools have to purchase locally grown foods?

No. School can buy directly from farmers, from farmers' markets, through an existing distributor or broker who procures from local farmers, or from a growers' cooperative.

Is there any federal assistance that schools may get to institute a farm to school program?

The 2002 farm bill contains language that directs the USDA to encourage food service directors to buy from regional farmers when possible. A federal farm-to-cafeteria assistance program has been authorized but not been funded.

What have other states done to establish successful farm-to-school programs?

Several states have found that a coordinator is very helpful in getting the program up and running. North Carolina, Massachusetts, New Mexico, and Washington have farm-to-school coordinators who facilitate their programs, as do some school districts, such as Santa Fe, New Mexico. Establishment of such a program in Oklahoma is pending. California has recently passed legislation funding greater procurement of California-grown fruits and vegetables. In North Carolina, the state provided \$1,000 "start-up" grants the first year to 50 schools to make purchases from NC farmers; \$500 in the second year. The program is now operating successfully without grant funding.

How has farm-to-school in Oklahoma been funded so far?

Using grant money and volunteer time, the Oklahoma Food Policy Council, with support from state agencies and OSU, devised and conducted a survey of school food service directors in 2002-3 and then organized a farm-to-school pilot project in 2004 and 2005. Results were published in the Oklahoma Farm-to-School Report. This effort was supported by the USDA Risk Management Agency, Community Outreach and Assistance Partnership Program.

The Oklahoma Departments of Human Services (Commodity Division), Agriculture, and Education, as well as the U.S. Dept. of Defense and USDA Food and Nutrition Service worked with the council on the pilot project.

In 2004 the USDA FNS provided grants to the school districts purchase the Oklahoma-grown watermelons. In 2005, the districts used their own DoD Farm-Fresh commodity funds to purchase the watermelons. In 2005 and 2006, the Kerr Center, with support from the USDA's Community Foods Project, has provided staff time and expertise to promote and organize a farm-to-school initiative in the state.

Do Oklahoma school districts need more assistance to implement farm-to-school?

The initial grants funding the pilot program are no longer available. The Oklahoma Dept. of Education Child Nutrition Program has initiated educational outreach to school food service directors about farm-to-school. The Oklahoma Food Policy Council believes that with more support from the state, the Oklahoma farm-to-school program could be expanded to include more schools, more

produce items, more farmers, and more food and nutrition education.

How could an expanded farm-to-school program benefit Oklahoma farmers?

The 2005 pilot program involving just six school districts spent over \$20,000 on Oklahoma-grown watermelons. These kinds of local sales keep dollars in Oklahoma and benefit communities across the state.

A farm-to-school program could potentially benefit farms of various sizes. Large school districts may be a good market for larger quantities of fruits and vegetables already grown on a commercial scale in Oklahoma, such as watermelons. Smaller-scale local farms could connect with small and medium-sized schools in the state.

A new market for Oklahoma farm products could spur farm diversification, encouraging Oklahoma farms to grow a greater diversity of crops that could be sold to schools. Farm-to-school could also spur technology and research to help fruit and vegetable growers in the state become more productive.

A robust state farm-to-school program might also benefit Oklahoma food processors and farmers who grow commodity crops. An example would be Oklahoma wheat processed within the state into healthy bread products and sold to Oklahoma schools.

Since the growing season and the school year don't completely coincide, how can farm-to-school work in Oklahoma?

No one is suggesting that Oklahoma farmers can supply all the fresh fruits and vegetables schools use. We do not have the climate to grow some crops (oranges, for example) that schools want. But many other crops that schools use or could use are already grown commercially in the state and can be harvested in the spring or fall. Watermelons are a good example: Oklahoma is ranked #12 nationally in watermelon production, but until recently the melons were not sold in large amounts to Oklahoma schools.

In greenhouses or under plastic, the seasons for other crops can be extended. Summer food programs could incorporate a wide diversity of Oklahoma-grown fruits and vegetables.

What Oklahoma-grown crops could be served in Oklahoma schools?

In a 2002 survey, school food service directors indicated they might purchase tomatoes, cucumbers, onions, lettuce, eggs, potatoes, melons, strawberries as well as ground beef, cheese and dairy products locally.

Isn't fresh produce hard to handle?

In a survey of food service, about _ of respondents indicated that lack of staffing or facilities may be a barrier to prepping large amounts of fresh produce. While not quite as easy to handle as opening a can, many fresh fruits and vegetables can be served either raw or cooked, making them more versatile than some canned or frozen items.

Does fresh produce have to be inspected by the Dept. of Agriculture before schools can use it?

No inspections are required of fresh, raw produce. Processed items have to follow food safety procedures established by the county or state.

What are some of the barriers to a widespread farm-to-school program being implemented in Oklahoma?

On the farm side, some produce items require immediate cooling after being harvested and many farmers lack this capacity. Farmers need information about what schools want, procurement policy, and in general what they need to do to make ordering from them convenient for food service.

On the school side, food service directors are doing the best they can to serve nutritious food on tight budgets. They lack information about how best to connect with farmers and procure farm-fresh foods. Teachers need educational activities and ag/nutrition curriculum to implement.

Distribution issues, quality standards and other issues need to be addressed for both sides to effectively connect in a farm-to-school program.

Can these barriers be overcome?

Farm-to-school efforts in Oklahoma have been given a promising start by the Oklahoma Food Policy Council. However, school districts need information about buying and using locally grown produce and assistance in expanding food and nutrition programs. Farmers also need information about connecting with local schools. A concerted effort is needed to expand the program and make it an effective tool in the fight to improve children's health.

If Oklahomans are willing to commit a small amount of the state's resources to "jump-start" this effort, a viable farm-to-school program can be created in Oklahoma that will greatly benefit both schoolchildren and farmers. Other states have made this commitment; if Oklahoma too embraces a comprehensive farm-to-school program, it will be in the forefront of innovative efforts to address childhood obesity and improve children's health for the better.



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Section 2

Eat Smart – Farm Fresh

- Eat Smart – Farm Fresh, USDA FNS
- Rethinking Procurement
- Is Fresh Best?

Eat Smart—Farm Fresh!

A Guide to Buying and Serving Locally-Grown Produce in School Meals



 United States Department of Agriculture

Food and Nutrition Service
Working Draft, December 2005

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Introduction

Farm-to-school encompasses many types of programs and school experiences such as planting and tending school gardens, educating children about nutrition, and of course, purchasing fresh, locally-grown farm products. While we believe all aspects of the farm-to-school experience should be encouraged, the handbook is written to address the needs of farm-to-school programs that involve schools' purchase of produce from local farmers for use in school meals.

Many federal and private organizations are working to promote farm-to-school programs. However, many existing farm-to-school publications do not address the specific considerations and challenges faced by schools in buying local produce, particularly in the procurement area.

This handbook is written for school food service personnel. Rather than cover all areas of farm-to-school issues, we have chosen to focus on those areas we believe are of most interest to schools: procurement, types and examples of farm-to-school distribution models, how to find locally-grown food and farmers, menu planning considerations, and strategies for success. The handbook also contains a comprehensive, annotated bibliography of additional farm to school resources that may be accessed online or by contacting the organization. Whether your school is considering a farm-to-school program, or looking for resource information to assist you in your current program, we hope this handbook will be of help.

Good luck with your program!

USDA Food and Nutrition Service



Distribution Models for Farm to School

With farm to school programs, the transport of farm products to the schools is in many cases the most challenging issue to be addressed. There is no "one size fits all", as individual circumstances differ greatly. Some of the issues to consider are: school district size and the existence of central kitchens or satellite kitchens; the storage capacity of the schools; the existence of farmer cooperatives or networks; the capacity of these networks to deliver; the distance involved with deliveries; the volume and type of products desired; and the amount of staff time needed to research and develop the distribution method. Below are descriptions of four distribution methods, and the advantages and disadvantages of each. Whatever method is chosen, it should address the needs of both farmers and food service, in order to be successful over time.

Food service staff buys direct from individual farmers.

Many school food service directors from around the country have initiated purchasing relationships with farmers, and buy directly from those farmers. There are many benefits to this procurement method, as food service staff can: request specific products in the form they need them; work out details and issues without a middle man; become familiar with what the farmer grows, and even request that farmers plant specific items for them. One additional advantage is that buying from individual farmers may exempt the purchase from bidding requirements as the total amount may be below the required bid minimum. (Food service directors are required to put out to bid any order greater than a specific dollar amount. For example, a school district may require that any purchase over \$15,000 must go out for at least three bids. However, if the purchase is less than \$15,000, the school is not required to obtain bids. The amount of the bid requirement can be defined at the school, school district or state level.)

The disadvantages of this procurement method become apparent if food service staff is buying from a number of farmers. Buying from individual farmers entails increased administration and paperwork. This can be quite overwhelming for a food service director who has been ordering all or most of their produce from one broker. There would be a transition from making one phone call to order product, to multiple calls, multiple invoices, and

Example 1: Olympia School District's "Organic Choices Salad Bar"

The Olympia School District in Washington State piloted the "Organic Choices Salad Bar" in October 2002 at Lincoln Elementary. It features organic fruit and vegetable choices, whole grain breads, and a protein selection. Organic fruit and vegetable choices include greens, apples, grapes, cherry tomatoes, green peppers, potatoes, squash, and cucumbers. At the first two pilot schools, fruit and vegetable servings increased an average of 27%, and participation rates in school lunch increased by 16%.

School food service personnel first worked with two local farmers. The food service department reached an agreement with one local farmer to provide organic potatoes and squash. Another farmer started providing organic salad greens in the spring of 2003. The school food service has since expanded purchasing of local foods through a distributor and DoD Fresh.

The district's central kitchen helps facilitate delivery for the school and the farmers. Farmers can bring their produce to one place, and the infrastructure is already established to distribute the food to other schools.

By eliminating desserts from the elementary menu (by request of teachers and parents), and reducing waste, the program has been financially sustainable. In fact, the program has not received any outside funding to date. The school district is now determining how to institutionalize the program.

coordinating multiple deliveries. In addition, a broker is generally able to provide a greater variety of produce than farmers, who are selling only what is in season and what they grow.

School food service works with a farmer cooperative.

In this model, farmers in a cooperative, or informal network, pool their resources to develop a group distribution strategy. While some farmer coops are focused solely on production, others are also involved in the marketing and distribution of farm products. Buying from a farmers' cooperative helps the school food service director reduce the time spent on the administrative tasks involved in ordering, receiving orders, invoicing and payment. In this way, ordering is done through



one person representing multiple farmers and in some cases, one delivery is made for multiple farmers. Another advantage is that cooperatives, or informal networks, can generally offer a wider variety of produce and a more consistent supply than one individual farmer.

Some farmer cooperatives have also been able to purchase cold storage facilities, a truck for delivery, and processing facilities to produce value-added products. This is a particularly helpful strategy in colder climates with a limited growing season, and is a benefit for food service staff, as they greatly appreciate receiving a bag of broccoli florets instead of a whole head of broccoli. Many school district food services do not have the labor or equipment necessary to do this kind of minimal processing.

The biggest disadvantage is that farmer networks, cooperatives or otherwise, do not exist in all regions of the country. Some new farmer networks and cooperatives have been formed as a result of the demand from institutional sales, but their numbers are limited. This model also limits contact with the individual farmers growing for the schools.

One alternative to buying from an organized farmer network is to have one farmer, or a staff person from a non-profit organization, handle some of the administrative tasks. One person could act on behalf of farmers, taking orders from food service and then contacting farmers to fill them. The school district would send one invoice to the intermediary person who would then handle the paperwork.

Example 2: GROWN Locally Cooperative

In Iowa, the local farm products that are the most popular with students include salad bar items as well as apples and applesauce, cucumbers, lettuces, carrots, broccoli, cabbage and cauliflower. The Iowa Farm to School project is the result of a collaborative effort of GROWN Locally (Grown Only With Nature), a small, local farmer cooperative, and the school food service staff at Decorah Community Schools. Their collaboration grew out of a Farm to School forum held in Ames, Iowa and sponsored by the USDA Small Farms/School Meals Initiative. The Food Service Director uses locally grown products for a salad bar and as a la carte items in four schools—two elementary, one middle school, and one high school. Farm-fresh items are particularly popular with students in the middle school and high school, which can be a challenging audience.

The GROWN Locally Cooperative provides much of the produce already washed to help reduce labor costs. However, some food preparation is needed to cut and chop the raw produce and the price of labor in the school kitchen has been the prohibiting factor in expanding this program. In response, GROWN Locally has built a small processing center licensed with the state of Iowa allowing them to provide their products in forms more accessible to school food service personnel and to extend the times products are available.

School food service purchases regional products at the farmers' market.

This strategy relies on farmers' markets for purchasing locally grown products. In this scenario, the food service staff contact the farmer one or two days in advance of the farmers' market, placing their order by fax or phone. The farmer then brings that order to the farmers' market, in addition to what he or she plans to sell that day through the market. In most cases, schools use their own truck and driver, and a buyer from the school or district goes to the local farmers' market to pick up the pre-ordered product. This option is only feasible where the farmers' market season and the school calendar coincide - in places with year-round school, or moderate climates with year-round farmers' markets.

Buying directly from a farmer at a farmers' market has the advantage of working face-to-face with growers, who know their competition is at the market as well. It also gives food service staff the opportunity to inspect the product quality, and see first-hand what other products are available. Farmers benefit from this arrangement since they can make two farm deliveries in one location - one to the farmers' market, and one to the school. This can also help to lower the price for the product, as only one trip is needed for both deliveries. However, buying at farmers' markets can also be time consuming, as this kind of shopping involves much more labor than a phone call to a distributor.

Example 3: Santa Monica Farmers' Market Salad Bar

When a parent suggested purchasing produce from the farmers market for a school salad bar, school food service personnel Tracie Thomas and Rodney Taylor at the Santa Monica-Malibu Unified School District were reluctant. After discussions with other parents and students about their food preferences, Thomas and Taylor decided to run a trial "farmers' market salad bar." Participation was overwhelming, and the program has been expanded to other schools. Grant funding helped cover the infrastructure costs, but increased participation in the school lunch program thanks to the salad bars has made the program economically sustainable.

Twice a week, school food service personnel place orders with farmers for produce, which they pick up at the Santa Monica Farmers Market. A site coordinator, assisted by parent volunteers, prepares the fruit and vegetables for the salad bar. Protein and bread items supplement the farmers' market produce to make a complete meal. Cafeteria monitors help ensure that students choose a variety of items.

The salad bar would not have been as successful without communication among school food service staff, teachers, parents, students, farmers' market staff, and farmers. Students and parents were involved in the initial design of the project and still inform decisions about what foods will be selected. Before the salad bars began, presentations were held to teach students how to properly use the salad bar, use appropriate portion sizes, and eat a balance of nutrients. Farmers come to the classroom and also host field trips so students learn where their food comes from and get more excited about eating local. Field trips to the farmers market have resulted in students asking their parents to return. Many of the schools are also developing school gardens, so children learn how to grow and harvest their own food. While not a primary source of food, school garden harvest is occasionally served in the salad bars.

During last year's National School Lunch Week, the Santa Monica-Malibu School District received a special visit from Eric Bost, Undersecretary for Food and Nutrition Services, in recognition of their work. The Farmers Market Salad Bar Program has proved a model for other schools in California.

School food service orders locally grown food through a traditional wholesaler.

In this scenario, food service works with a distributor who purchases from local farms. Since food service directors already purchase from brokers or distributors, this allows them to maintain an existing relationship, as well as purchase other items that farmers are not able to provide. This method also allows for centralized billing, delivery and payment - but cuts farmers out of the communication loop with the food service director.



The major disadvantage of buying through a distributor is that it is difficult to know how diligent the distributor is being in attempting to source local product. Buying from local farmers may or may not be a top priority for a distributor who tries to fill an order with the least expensive product available. Unless the distributor is already aware of local farms, he or she may not be willing to make the additional effort to find them.

In some instances, wholesalers have worked very well with local farmers. One step food service can take is to request access to the buying records of the broker, showing the origins of the product. This can also be a requirement written into an agreement with the broker. In this model it is still important that food service staff familiarize themselves with the availability and seasonality of the products in their region in order to make reasonable requests of the wholesaler who may be responsible for sourcing the products.

School food service purchases through DoD Fresh Program.

The Department of Defense's (DoD) Produce Business Unit provides fresh fruits and vegetables worldwide to federal and military institutions. To capitalize on DoD's large-scale buying power, FNS entered into an agreement with DoD in 1994 to buy and distribute fresh fruits and vegetables to schools in eight states. The produce was paid for with commodity entitlement funds, and enabled schools to take advantage of DoD's expertise in food procurement and distribution at a nominal cost. This was the start of DoD's Fresh Fruit and Vegetable Program, otherwise known as DoD Fresh.



A huge success, DoD Fresh now operates in 45 states, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands. In addition to commodity entitlement funds, schools may now use Section 4, 11, and general school funds to purchase fresh fruits and vegetables from DoD. At present, \$50 million of commodity entitlement funds are allocated to states annually to procure fresh fruits and vegetables through DoD Fresh.

In recent years, DoD has worked with states to establish farm-to-school programs. Utilizing existing DoD Fresh networks, DoD establishes farm-to-school partnerships between local producers/producer organizations, state Departments of Agriculture and Education, and school food service personnel, as appropriate. Some states budget, for planning purposes, a percentage of their funds to establish a farm-to-school initiative in their state.

At present, twelve states and one territory are working with DoD in varying degrees to procure local produce for school meals. They are: AL, MS, NC, NM, TX, WV, KY, MI, CA, NY, NJ, OK, and

Puerto Rico. DoD farm to school programs work differently in each state/territory and, unlike many distribution models, DoD programs require coordination and good working relationships among many federal, state, and local organizations. DoD often relies on state agriculture personnel or other knowledgeable agriculture organizations to facilitate these partnerships because they are familiar with growers and their capabilities.



In most DoD farm-to-school programs, the state departments of agriculture are involved in identifying farmers and farmer organizations because DoD brokers may not have connections with local farms. However, in other instances, this work has been done by non-profit organizations working on food, farming, and agricultural issues. Since this is a crucial part of the program, the department or organization taking on this task should be well connected to farmers within the region.

North Carolina exemplifies what can be accomplished when DoD and state partnerships work effectively. The program began in 1989 when the state provided 50 schools with \$1,000 grants to purchase produce from local farmers. As of April 2004, North Carolina schools have purchased over \$1.6 million dollars in produce from local farmers. The North Carolina Department of Agriculture and Consumer Services administers the program with DoD's assistance and provides the warehouses and trucks needed for product storage and delivery. In New Mexico, partnering with DoD has allowed schools to add local flavor to the menu in the form of green chilies, a favorite with New Mexico schoolchildren. Begun in the 2003 school year, New Mexico's farm to school program has purchased approximately \$75,000 worth of watermelons, russet potatoes, and green chilies from local farmers to date. New Mexico relies on DoD's existing distribution system to deliver the produce to schools and school districts.

DoD farm-to-school partnerships typically begin with a planning meeting. DoD coordinates a meeting between state agriculture and school food service personnel to determine items that could be used in the school menus. Other potential participants include farmers, food service staff from the district level, direct marketing groups that work directly with farmers, and state nutrition staff. The participants then determine, based on product availability and menu planning needs, the local produce items that will be grown for use in school meals.

Once a farm-to-school partnership is established, DoD works with the parties to ensure a successful program. DoD negotiates the actual price of product with growers or co-ops to assure that, based on current market prices, the prices are fair and reasonable. DoD is committed to paying farmers a fair price and DoD negotiations are not based on finding a "lowest cost deal." DoD also works with growers and grower organizations to assure that all required certification, such as Blank Purchase Agreements, are in place and quality standards and post-harvest requirements are established. Standards and requirements may be set for pre-cooling of product, size, grade, and packaging. In some cases, DoD can work with processors to supply value-added produce to schools' specifications, such as pre-bagged or pre-cut vegetables. For example, Texas is purchasing cut carrots, New York is buying sliced apples, and blueberry and strawberry cups are a big hit with North Carolina schoolchildren. Since DoD buys only Grade A produce, the quality is generally excellent.

After product specifications have been determined, DoD assists states in monitoring the crops to ensure product quality. DoD will also establish a timetable with all parties to ensure product quality and

availability meet schools' needs. DoD often partners with states and schools to promote the benefits of buying fresh produce from local farmers.

Distribution of the produce, once harvested, varies according to farmers, schools, and states' delivery methods and warehousing capabilities. DoD assists states and growers during the distribution process to ensure product quality and freshness are maintained. Schools are encouraged to start with a few items the first year in order to work out distribution and quality standards. As logistical and distribution issues are resolved, more produce items can be added in successive years. DoD relies on existing distribution systems to transport the farm products to the schools. In states where there is one system, the distribution can work quite smoothly. However, some states rely on multiple methods to receive product, including private food service coops and private brokers. In these situations, transportation would need to be coordinated with all parties.

Once initial start-up issues are resolved, DoD recommends that all parties meet to discuss the program's performance. For planning in successive years, a farm-to-school "calendar" can be established, showing what local produce items can be purchased for the upcoming school year and when. Use of the calendar enables growers to make adequate plans to meet schools' needs and allows schools to plan menus to include the local produce.

The grower or grower organization is paid directly by DoD when the produce is purchased. DoD will then bill the state, county, or school district directly if Section 4 or 11 funds are used to pay for the purchase. A school district can still purchase from DoD directly using Section 4 or 11 funds even if the state does not participate in the DoD Fresh Program. If commodity entitlement funds are used to pay for the purchase, FNS will reimburse DoD directly. DoD currently charges a flat fee for its services (currently 5.8% of the order amount). The fee is adjusted annually and reflects DoD's actual cost of administering the program.

Building Support for Local Purchasing

When developing a local purchasing program, additional support may be helpful, and can generally be found from folks in the following three groups: within the school or school district, through farmers and farm organizations; and community and government agencies. In some instances, food service directors have met in a group with potential supporters, to determine the best way to move forward. In other situations, it may make more sense to connect at a one-on-one meeting, or in a small group meeting. In either case, here are some potential supporters of farm to school work:

Schools

School food service staff
Nutritionist
Principals
Teachers
Students
Parents, PTA
Nurse
School Board members

Farmers and Places to Find Them

Farmers' Markets, Internet
4-H groups, feed supply stores
U.S. and State Departments of Ag.
Roadside Stands/U-Pick/CSAs
Commodity boards and commissions
Farm Bureau, Cooperatives
Cooperative Extension, Small Farm
County fairs, farm equipment shows

Community and Government Agencies

Environmental organizations
Sustainable agriculture groups
Anti-hunger, food security organizations
County health and nutrition staff
U.S. and State Departments of Agriculture
County Agriculture Commissioner
City Council members
Representatives from local congressional and state representative offices

When incorporating local foods into meal programs, here are some issues to consider:

Operational Issues crops and their seasons, value-added processing, transportation and delivery, ability to meet demand, storage and food preparation capacity, menu adaptability, food safety

Budgetary Issues equipment and labor necessary for food preparation, the cost of food, staff time to develop the purchasing arrangements

Potential Partners potential partners may be involved in other components of a farm to school program such as a school garden, cooking classes, or nutrition education



How to Find Locally Grown Foods

Connect with local agricultural organizations and express interest in developing relationships with local farmers. Many State Departments of Agriculture routinely make lists of local farmers available to the public, and will be happy to provide a list upon request. Other potential sources of information about local suppliers of farm products include county extension offices, the cooperative extension department at land-grant universities, State Farm Bureaus and other State-based producer organizations.



The U.S. agricultural extension system provides an especially efficient way for school food service personnel to find out about agricultural producers in their local communities. More than 100 land-grant colleges and universities throughout the nation work with approximately 2,900 county and regional extension offices to offer specialized information and educational services to the public on agriculture/natural resource management and family/consumer sciences. Agents working at these regional and county extension offices are typically well informed about farm operations in their specific

geographic area. To find the extension office nearest to you, you may consult a national list of county and regional extension offices maintained by USDA's Cooperative State Research, Education and Extension Service, located at <http://www.csrees.usda.gov/Extension/index.html>, or a list of land-grant college and university extension offices, located at http://www.csrees.usda.gov/qlinks/partners/state_partners.html

Connect with local distributors and ask them to source foods from local farms. The more demand that local wholesale distributors have for local foods, the greater effort they will make in sourcing this product. In addition, food services personnel can ask local distributors to provide sourcing information about the grower/producer of local foods at the time of purchase/delivery.

Connect with institutions that purchase locally produced foods. Food service managers that are currently purchasing from local farmers are good resources for others interested in making connections. These individuals may be able to help make connections with farmers and/or distributors that supply high quality, locally produced foods, and may also be able to provide ideas for ways to best incorporate local foods into existing food service operations. (If you don't know any food service director in your area that is managing a local procurement program, you may find it helpful to contact one of the school food service directors featured in chapter xx for tips on how to start your own local food purchases.)

Visit local farmers' markets and talk with the market managers. Market managers may be able to assist food service professionals in find farms that can supply desired quantity and quality of desired products. A comprehensive list of farmers markets across the country, along with a list of farmers market program representatives in each State, are available from the USDA Agricultural Marketing Service's Farmers Market website, accessible at: <http://www.ams.usda.gov/farmersmarkets/map.htm>.

Make connections with local community food cooperatives. Local food cooperatives often have established relationships with local producers and may be able to connect food service professionals with their farmer suppliers.

Connect with a "Buy Local" campaign. Organizations that promote locally produced foods are knowledgeable about local farms in the area and may be able to connect food service managers with interested producers. These campaigns are run by local and state government organizations. You may wish to refer to Food Routes, www.foodroutes.org, for sources of local foods in your area.

Connect with local food advocate organizations. Organizations such as *Chefs Collaborative*, *Slow Food* and sustainable agriculture organizations are great places to learn about what other culinary and food service professionals are doing with locally produced foods. Members of these organizations know which farms are currently selling to restaurants and institutions. They are familiar with local products and know how to utilize them in food service menus. The contact information for the national headquarters of these organizations is as follows:

Chefs Collaborative
262 Beacon Street
Boston, MA 02116
Phone (617) 236-5200
Fax (617) 236-5272
info@chefscollaborative.org

Slow Food U.S.A.
434 Broadway, 6th Floor
New York, NY 10013
Phone (212) 965-5640
Fax: 212-966-8652
info@slowfoodusa.org

The Slow Food U.S.A. website also features a national directory of local chapter representatives, listed by State. This directory may be retrieved at <http://www.slowfoodusa.org/contact/index.html>.

Connect with nutrition education organizations. Farm to School provides a framework for schools to make a direct impact on students' health and the agricultural community by offering more fruits and vegetables in school meals and throughout the campus. Many organizations are working with schools to prevent overweight and obesity and improve children's health. Others promote sustainable agricultural systems and environmental education. The organizations listed below can provide ideas and resources to help you successfully implement Farm to School from a nutrition education, health or agricultural perspective:

- **National 5 A Day Partnership:** The National 5 A Day Partnership is an alliance of Federal agencies, private industry, and health organizations which have joined forces to help all Americans meet the Dietary Guidelines recommendations to increase fruit and vegetable consumption. The partnership guides the 5 A Day for Better Health Program— the Nation's largest public/private nutrition education initiative with 5 A Day coordinators in each State and territory, and in the military. Its goal is to increase fruit and vegetable consumption to at least 5 servings per day for 75 percent of Americans by 2010. You can visit the 5 A Day Web site at www.5aday.gov. Member organizations include: American Cancer Society, Centers for Disease Control and Prevention, National Alliance for Nutrition and Activity, Association of State and Territorial Directors of Health Promotion and Public Health Education, National Cancer Institute, Produce for Better Health Foundation, Produce Marketing Association, United Fresh Fruit and Vegetable Association, and the United States Department of Agriculture.

- **Team Nutrition:** Team Nutrition is USDA's nutrition education initiative to promote healthy food choices and physical activity for school age children. Team Nutrition schools make a commitment to offer healthy school meals, encourage student to be more physically active, and build community support for a healthy school environment. USDA provides free or low cost nutrition education materials for teachers and students, and technical assistance manuals for food service staff. Check out Fruit and Vegetables Galore, USDA's newest, colorful resource manual with useful tips to boost the nutritive value, taste, and eye appeal of school meals, and entice students to try appealing and nutritious fruits and vegetables. www.fns.usda.gov/tn You can gain community support by showcasing the benefits of Farm to School and improved school meal programs. USDA offers a kit, "Changing the Scene: Improving the School Nutrition Environment," with scripts, parent newsletters, and media tips to get the word out about your efforts. USDA collaborated with 16 organizations to develop this action kit for state and local level partners to educate decision makers about the role school environments play in helping students meet the Dietary Guidelines for Americans. The kit is available at no charge at FNS' website: www.fns.usda.gov/tn/Healthy/changing.html
- **Eat Smart Play Hard:** Let Power Panther promote Farm to School by guiding your students to eat more fruits and vegetables! This USDA initiative encourages children to eat breakfast, choose healthy snacks, and be more active. You can order free nutrition education materials in English and Spanish through the FNS website: www.fns.usda.gov/eatsmartplayhard/
- **Healthier US School Challenge:** The U.S. Departments of Agriculture, Health and Human Services, and Education are working together to build healthier communities that promote healthy lifestyle choices, including good nutrition and physical activity. Take the Healthier US School Challenge, and strive for Gold! Find out more about Healthier US, visit FNS' website: www.fns.usda.gov/tn/HealthierUS/index.htm
- **Ag in the Classroom:** Each state, U.S. territory, and the District of Columbia has an Agriculture in the Classroom Program to promote awareness about the agriculture industry. AITC also develops curriculum for classroom activities which could link with Farm to School promotions in the cafeteria. www.agclassroom.org/

Strategies for Success

Farm to School projects vary greatly by region, by community, even by school district. However, a variety of key components are inherent in most farm-to-school initiatives. Using a combination of strategies may help you develop a strong and sustainable foundation for farm-to-school in your area.

- Assess need for additional resources, adequate funding, and support from the school administrators, parents, and teachers.
- Commit to a cooperative approach with key partners including farmers, food service managers, school administrators, teachers, parents, and students in early planning discussions.
- Start small, build on success, and encourage project partners to join at their pace.
- Organize product supply; develop contact with farmer organizations, grower networks, cooperatives and/or distributors.
- Work to develop a strong educational component aimed at increasing children's understanding and acceptance of new foods and menu formats in the lunchroom.
- Commit to healthful foods for students that model positive choices and reflect the sound nutritional advice they receive in the classroom. Don't focus exclusively on controlling costs or increasing participation.
- Build policy support at the state, local or district level for ongoing farm-to-school programming.
- Be patient and solve problems creatively; be willing to experiment.
- Communicate thoroughly, honestly, and as frequently as needed. Be sure to include all relevant partners and collaborators in important decisions.
- Promote your project through appropriate avenues such as the local media to build community awareness and support over time.
- Learn from the experiences of established programs. Share these examples with your key partners.

Procurement of Food in a Farm-to-School Project

Many school food authorities (SFAs) would like to purchase food from local farmers but are not sure of the rules for purchasing and procuring food products in a “farm-to-school” arrangement. This section will provide information on the **federal** procurement requirements and identify areas where the state rules must be consulted. The information is provided in a Q & A format. Areas that need individual state clarification are identified by the initials “SA” in parenthesis.

Can a SFA purchase food directly from a farmer?

Yes, as long as the SFA observes the procurement rules that apply when purchasing food with the school food service account money.

What are the available procurement methods?

Several procurement methods are available to purchase food products. All are designed to provide open and free competition. SFAs should identify which method best meets the needs of the farm-to-school project that is in place. The three most frequently used procurement methods are:

Competitive Sealed Bids – A method of procurement whereby sealed bids are publicly solicited and a fixed-price contract is awarded to the responsible bidder whose bid, conforming with all the material terms and conditions of the invitation for bid, is lowest in price.

Competitive Proposals – A method of procurement whereby proposals are requested from a number of sources and the request for proposal is publicized, negotiations are conducted with more than one of the sources submitting offers, and either a fixed-price or cost-reimbursable type contract is awarded, as appropriate. Competitive negotiation may be used if conditions are not appropriate for the use of competitive sealed bids.

Small Purchase – A relatively simple and informal procurement method that is appropriate for a procurement of food, services or supplies costing not more than \$100,000 (the current federal small purchase threshold), or a lesser amount - specified by State law or local requirements. SFAs **must** check with their administering State agency and local officials to determine whether the State/local small purchase threshold is less than the federal threshold and the State or local small purchase procedures that must be followed.

Contact your state agency for additional information on these procurement methods in your state

Which method(s) should be used for farm-to-school purchasing?

When using nonprofit food service account funds, public SFAs must follow their own state and local rules except where those rules are inconsistent (less restrictive) with the federal requirements. In those cases, the SFA must substitute the more restrictive federal requirement. Nonprofit SFAs may use their own organizational rules as long as those rules are consistent with federal requirements or a nonprofit SFA may chose to follow the federal rules in their entirety. Depending on the annual expected purchases of the

product and the applicable state and local small purchase thresholds, SFAs may be able to use small purchase procedures. SFAs should never subdivide purchases to avoid conducting a formal procurement.

What is “Open and Free Competition”?

The underlying foundation of all procurement, without regard to dollar value, is that regardless of the method used, the procurement must be conducted in a manner that provides maximum open and free competition. Free and open competition basically means that all suppliers are “playing on a level playing field” with the same opportunity to compete. Procurement procedures must not restrict or eliminate competition.

How could a SFA restrict competition?

Subdividing its purchases to avoid conducting a formal procurement:

Unreasonable requirements – placing unreasonable requirements on suppliers in order for them to qualify to do business, e.g., requiring unnecessary experience and bonding requirements.

Noncompetitive practices – encouraging or fostering noncompetitive practices, e.g., collusion between farmers. Failing to adequately advertise and solicit prices could encourage potential suppliers to manipulate their bid prices.

Conflicts of interest – allowing conflicts of interest to occur. Conflicts of interest can occur when the individual(s) responsible for determining bid/proposal responsiveness can be overruled by other individuals within the organization or if the individual responsible for determining responsiveness (or any member of his/her family) has any personal or financial interest in any of the offering firms.

Writing bid specifications – using bid specifications or contract terms written by a potential contractor.

Insufficient time – not allowing bidders/offerers sufficient submission time when advertising/soliciting the invitation for bid or request for proposal.

Geographic preferences – Using in-State or local geographic preferences in awarding a contract

How can an SFA purchase from a local farmer, and follow the USDA policy on purchasing local products, when geographic preferences are not allowed?

Frequently, local officials are encouraged to purchase in-State products. In SFAs that border State or other geographic boundaries, there may be local farmers in the nearby State that could supply the SFA with food products through a farm to school project. Encouraging partnerships between local farmers and SFAs does not require the use of an in-State or local preference. The use of such preferences could prevent a qualified local farmer from competing simply because the farmer is located outside of a specific geographic area.

If the SFAs anticipated annual purchase of a particular product will be less than the applicable small purchase threshold, the SFA can use these simplified procedures and contact a number of local farmers. While the Federal small purchase threshold is currently set a \$100,000, SFAs must always check with their state and local officials since many states and municipalities have LOWER small purchase thresholds.

To facilitate purchase of locally-grown produce, SFAs can: identify and encourage local farmers to submit bids; look into alternative pack sizes and distribution methods that reflect product availability, using pricing structures such as fixed delivery charges with product prices that respond to the current market price; and explore new and different products that are available through local farms.

SFAs also need to develop specifications that reflect the characteristics of the products they seek. For example, local farmers grow a specific lettuce variety that students prefer, but that the SFA cannot get through their broker or distributor. The SFA can write its specification requiring this lettuce variety. However, just writing the specification alone will not be adequate to ensure local farm participation. The SFA must have “laid the groundwork”, i.e., identifying and encouraging local farm participation for the procurement to be successful.

Can SFAs split up large purchases into smaller amounts and thereby fall under the small purchase threshold?

SFAs cannot intentionally split purchases in order to fall below the federal small purchase threshold. For example, if a SFA will be purchasing \$150,000 worth of lettuce for the salad bar they cannot split the purchase into two purchases of \$75,000 each. However, the SFA can specify different varieties of lettuce that must be provided and be willing to award its lettuce bid to more than one supplier.

Another approach, when an adequate number of suppliers exist, is for the SFA to conduct a procurement action for a specific item, for example, apples, instead of conducting a procurement to obtain a single supplier for all of its fruits and vegetables for the school year. This approach could allow local apple growers to compete for the SFA’s apple contract.

Can SFAs set aside a portion of their school food service funds or other funds to purchase only local product?

SFA’s may not technically “set aside” a portion of food service funds, and then use such funds to purchase only local product without regard to price or fairness of the purchasing process. Such a set-aside is not allowable using the nonprofit school food service account. However, SFAs may provide a line-item in the school food service budget as designated for farm to school initiatives.

For example, a SFA may budget \$5,000 for a nutrition education and farm-to-school project. In this example the SFA will use visits to local farms and the purchase of produce to teach students the value of consuming healthy foods and how those foods were produced.

If the local education agency chooses to set aside non-school food service account funds specifically for purchase of local product, they are not bound by National School Lunch Program rules but should check on the rules governing that funding source.

Do federal procurement rules apply when schools do not use money from the food service account, i.e., the school uses general fund monies?

No. Federal rules only apply to using nonprofit food service funds. However, State and local rules may apply to other school funds.

What are the Federal procurement requirements for the NSLP?

The NSLP regulations address the procurement in 7 CFR 210.21.¹ The regulations address four main areas of procurement:

General – requires local school food authorities to comply with the requirements of 7 CFR 3015 (replaced in August 2000 by 7 CFR Part 3016 for public SFAs and 7 CFR Part 3019, for nonprofit SFAs) for the procurement of food, and other goods and services, when using the school food service funds.

Contractual responsibilities – confirm that the local school food authority is responsible for its own contracts.

Procurement procedures – requires that SFAs may use their own procurement procedures which reflect applicable State and local laws and regulations as long as those procedures meet the requirements of 7 CFR Parts 3016 and 3019.

Buy American - requires that SFAs purchase, to the maximum extent practicable, domestic commodities or products. Buy American applies to the 48 contiguous states, Hawaii and the Commonwealth of Puerto Rico. Buy American does not create the right to use an in-state or local geographic preference.

What are the requirements of 7 CFR 3016 and 3019?

The regulations at 3016 for public SFAs and 3019 for nonprofit SFAs have similar requirements. The following is an example from Part 3019:

§ 3019.44 Procurement procedures.

(a) All recipients shall establish written procurement procedures. These procedures shall provide for, at a minimum, that paragraphs (a)(1), (a)(2), and (a)(3) of this section apply.

(1) Recipients avoid purchasing unnecessary items.

(2) Where appropriate, an analysis is made of lease and purchase alternatives to determine which would be the most economical and practical procurement for the Federal Government.

(3) Solicitations for goods and services provide for all of the following:

¹ The full text of 7 CFR 210.21 is found in Appendix A.

(i) A clear and accurate description of the technical requirements for the material, product or service to be procured. In competitive procurements, such a description shall not contain features which unduly restrict competition.

(ii) Requirements which the bidder/offeror must fulfill and all other factors to be used in evaluating bids or proposals.

(iii) A description, whenever practicable, of technical requirements in terms of functions to be performed or performance required, including the range of acceptable characteristics or minimum acceptable standards.

(iv) The specific features of "brand name or equal" descriptions that bidders are required to meet when such items are included in the solicitation.

(v) The acceptance, to the extent practicable and economically feasible, of products and services dimensioned in the metric system of measurement.

(vi) Preference, to the extent practicable and economically feasible, for products and services that conserve natural resources and protect the environment and are energy efficient.

(b) Positive efforts shall be made by recipients to utilize small businesses, minority-owned firms, and women's business enterprises, whenever possible. Recipients of Federal awards shall take all of the following steps to further this goal.

(1) Ensure that small businesses, minority-owned firms, and women's business enterprises are used to the fullest extent practicable.

(2) Make information on forthcoming opportunities available and arrange time frames for purchases and contracts to encourage and facilitate participation by small businesses, minority-owned firms, and women's business enterprises.

(3) Consider in the contract process whether firms competing for larger contracts intend to subcontract with small businesses, minority-owned firms, and women's business enterprises.

(4) Encourage contracting with consortiums of small businesses, minority-owned firms and women's business enterprises when a contract is too large for one of these firms to handle individually.

(5) Use the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Department of Commerce's Minority Business Development Agency in the solicitation and utilization of small businesses, minority-owned firms and women's business enterprises.

(c) The type of procuring instruments used (e.g., fixed price contracts, cost reimbursable contracts, purchase orders, and incentive contracts) shall be determined by the recipient but shall be appropriate for

the particular procurement and for promoting the best interest of the program or project involved. The "cost-plus-a-percentage-of-cost" or "percentage of construction cost" methods of contracting shall not be used.

(d) Contracts shall be made only with responsible contractors who possess the potential ability to perform successfully under the term and conditions of the proposed procurement. Consideration shall be given to such matters as contractor integrity, record of past performance, financial and technical resources or accessibility to other necessary resources. In certain circumstances, contracts with certain parties are restricted by agencies' implementation of E.O.s 12549 and 12689, "Debarment and Suspension."

(e) Recipients shall, on request, make available for the Federal awarding agency, pre-award review and procurement documents, such as request for proposals or invitations for bids, independent cost estimates, etc., when any of the following conditions apply.

(1) A recipient's procurement procedures or operation fails to comply with the procurement standards in the Federal awarding agency's implementation of this part.

(2) The procurement is expected to exceed the small purchase threshold fixed at 41 U.S.C. 403(11) (currently set at \$100,000) and is to be awarded without competition or only one bid or offer is received in response to a solicitation.

(3) The procurement, which is expected to exceed the small purchase threshold, specifies a "brand name" product.

(4) The proposed award over the small purchase threshold is to be awarded to other than the apparent low bidder under a sealed bid procurement.

(5) A proposed contract modification changes the scope of a contract or increases the contract amount by more than the amount of the small purchase threshold.

Meeting School Meals Initiative Requirements with Farm to School

Introduction

What is the School Meals Initiative?

Since 1995, the School Meals Initiative has helped foodservice directors and staff offer healthier meals and promote nutrition education to support healthy lifestyle behaviors. It establishes a framework to plan and evaluate school meals using nutrition standards (based on Recommended Dietary Allowances for key nutrients), appropriate calorie levels, and recommendations from the Dietary Guidelines for Americans. NSLP regulations require that breakfast and/or lunch menus, when averaged over a school week, meet the nutrient standards for the appropriate age or grade group. *Meeting these standards is the goal for all menu-planning options.* For more information about SMI requirements, refer to *FNS 303-A Menu Planner for Healthy School Meals*, and the *Road to SMI Success: A Guide for Local School Foodservice Directors* (this is still in draft).



What are the nutrition standards?

USDA School Meals Initiative for Healthy Children Nutrition Standards

- ***Recommended Dietary Allowances (RDA)***
 - 1/4 RDA for age/grade group for breakfast for protein, calcium, iron, vitamins A and C
 - 1/3 RDA for age/grade group for lunch for protein, calcium, iron, vitamins A and C
- ***Recommended Energy Allowances (calories)***
 - Appropriate for age/grade group
- ***Dietary Guidelines for Americans***
 - Eat a variety of foods.
 - Limit total fat to $\leq 30\%$ of calories.
 - Limit saturated fat to $<10\%$ of calories.
 - Choose a diet low in cholesterol.
 - Choose a diet with plenty of vegetables, fruits and grain products.
 - Choose a diet moderate in salt and sodium.

How can Farm to School help schools meet the nutrition goals?

Farm to School links schools with local growers to supply more fruits and vegetables for children to enjoy as part of school meals.

USDA recommends that meals include:

- a vitamin A-rich vegetable or fruit at least 2-3 times a week;
- a vitamin C-rich vegetable or fruit 3-4 times a week, and breakfasts include them frequently;
- a variety of vegetables and fruits;
- foods that are good sources of fiber, such as fresh fruits and vegetables and whole grain products.

Iron, Vitamins A and C, fiber, and phytochemicals found in fruits and vegetables play an important role in optimal health, and protection against chronic diseases. Offering a wide variety of fruits and vegetables also supports the DGA recommendations.

Planning menus that offer more fresh fruits and vegetables

Planning menus involves much more than listing which foods you offer each day. As you evaluate your current menus, keep in mind these basic principles: (see Menu Planner for Healthy School meals, Chapter 4.)

- **Balance:** Flavors, textures, colors
- **Variety:** Cooked vs. raw, different shapes and textures, familiar and new foods
- **Choices:** Include regional and cultural preferences; let students choose.
- **Contrast:** Strive for contrasts of texture, flavor, and methods of preparation.
- **Color:** Use fruits and vegetables to add natural color to entrees, side dishes
- **Eye Appeal:** Offer fruits and vegetables in an attractive way on the serving line or salad bar. Use garnishes.

Which menu planning system do you use?

The requirements for meeting the nutrition standards will depend on whether you use a Food-based menu planning or nutrient-based menu planning system. At lunch, schools using food-based systems must offer at least 2 servings of different fruits or vegetables, with a total volume of at least $\frac{3}{4}$ cup, and a minimum $\frac{1}{8}$ cup portion size.

For schools using nutrient-standard menu planning, there is no minimum requirement; however, in order to meet the Dietary Guidelines goals, it is recommended to offer at least 2 different fruits/vegetables totaling at least $\frac{3}{4}$ cup. Remember, the goal is to increase the variety and amount of fruits and vegetables offered through school meals.

Other points to consider when offering more fruits and vegetables:

- **Product availability:** Use foods in season, at the peak of flavor and lowest cost. Offer fresh whenever possible.
- **Staffing and equipment:** Is there adequate refrigeration/freezer space? Do you have sufficient counter space, sinks and preparation equipment? What about serving tools and dishes or compartments in a compartment tray needed to serve each meal? Can employees prepare in the time available? How much hand preparation is required for each menu? Schedule employees' time so their particular skills can be used to best advantage. Balance the workload — food preparation and clean-up — from day to day and from week to week.
- **Use the Food Buying Guide** to plan adequate portion sizes – remember that the “as purchased” weight or volume is greater than the “as consumed” volume.
- **Know your customers:** Be sure to get input from students and staff when designing cycle menus.

Purchasing and Preparing Fruits and Vegetables²

Foods you serve can only be as good as the quality of the foods you purchase. Careful use of competitive buying will not only help control food costs but will also help upgrade the quality of your meals. Here are some additional tips...

- **Be familiar with sources of supply.** Buy from growers who provide the best quality food at the most reasonable prices. Seek out potential new suppliers. Put them on your mailing list for bids and requests for proposals. Also look for opportunities to buy through cooperative purchasing groups (co-ops).
- **Buy according to how you will use a product.** Consider grade, style, type, size, count, container, and packing medium. Develop clear, concise purchase specifications and food product descriptions. To ensure the purchase of quality foods at competitive prices, write specifications and descriptions that will make clear what you want and what you will accept. (Refer to First Choice and Choice Plus, NFSMI).
- **Inspect upon delivery.** Make sure what is delivered meets your specifications.
- **Remember storage facilities.** Decide when to buy each type of food, keeping in mind perishability and storage space.
- **Keep records of food purchases.**
- **Use standardized recipes, even for salad bars.**
- **Determine equipment needs.**
- **Balance workload and delivery schedules.**

² See Fruits and Vegetables Galore and NFSMI resources.

Marketing Fruits and Vegetables³

A promotion provides an excellent opportunity to introduce new menu items. But don't overdo it — show only one new fruit or vegetable item at a time. A total of two or three in a month is plenty! To make sure students notice:

- Make the new food item sound appealing on the printed menu.
- Offer an incentive — a reward for choosing the new food.
- Display a poster that lists the food's nutritive value. Look for resources from commodity groups such as Peach Growers, etc.
- Introduce new foods in the classroom or plan small portions when first offering a new food.

Strategies to Incorporate Farm to Cafeteria Programs

- **Salad Bars:** Showcase local foods in a salad bar as an alternative entrée choice or in combination with other entrees. One advantage of a salad bar is that local foods can be incorporated when available. Use colorful signs to help children choose enough.
- **Teacher Nutrition Education:** Serve local foods in the cafeteria that are featured in nutrition education curriculum in the classroom or school garden.
- **Main Dish Items:** Incorporate local foods in your favorite lunch entrees; and offer more vegetarian choices. For example, add color and crunch to pizza using green peppers, zucchini, etc.
- **Side Fruit/Vegetables:** Serve locally produced fruits or vegetables as a side dish for lunch. Locally produced fruits, such as apples, pears, berries or melons, can be served with cereal as a breakfast option.
- **Special Events:** Host a "Harvest Festival" in the cafeteria, showcasing many different locally produced foods at one event, or showcase one locally grown product each month. Introduce different foods to students and educate them about what foods are produced locally. Partner with teachers, health or agriculture groups which can provide resources and assist with marketing the event. Make the cafeteria the fun, "in" place to have lunch!



³ See Fruits and Vegetables Galore and Chapter 8 in Menu Planner.

Maximize your Nutritional Impact!

Vegetables High in Recommended Nutrients

	Iron	Vitamin A	Vitamin C
Best Sources	Beet greens, carrots, Swiss chard, red chili peppers, collards, dandelion greens, kale, mustard greens, peas and carrots, sweet red peppers, spinach, winter squash (acorn, butternut, Hubbard), pumpkin, sweet potatoes, turnip greens	Beet greens, carrots, Swiss chard, red chili peppers, collards, dandelion greens, kale, mustard greens, peas and carrots, sweet red peppers, spinach, winter squash (acorn, butternut, Hubbard), pumpkin, sweet potatoes, turnip greens	Broccoli, Brussels sprouts, sweet red and green peppers, red and green chili peppers
Good Sources	Broccoli, chicory greens	Broccoli, chicory greens	Cauliflower, collards, kale, kohlrabi, mustard greens, watercress
Other Sources	Green asparagus, green chili peppers (fresh), endive, escarole, tomatoes, tomato juice or reconstituted paste or puree	Green asparagus, green chili peppers (fresh), endive, escarole, tomatoes, tomato juice or reconstituted paste or puree	Asparagus, cabbage, dandelion greens, okra, potatoes (baked, boiled, or steamed), potatoes (reconstituted instant mashed/vitamin C restored), sauerkraut, spinach, sweet potatoes (not canned in syrup), tomatoes, tomato juice or reconstituted paste or puree, turnip greens, turnips

Fruits High in Recommended Nutrients

	Iron	Vitamin A	Vitamin C
Best Sources	Mangoes	Mangoes	Oranges, orange juice, papayas, guavas, kiwi
Good Sources	Apricots, cantaloupe, papayas, purple plums (canned).	Apricots, cantaloupe, papayas, purple plums (canned)	Grapefruit, grapefruit juice, grapefruit/orange juice, kumquats, mangoes, pineapple juice (canned/vitamin C restored), strawberries, tangerine juice, tangerines
Other Sources	Red sour cherries, nectarines, peaches (not canned), prunes.	Red sour cherries, nectarines, peaches (not canned), prunes	Cantaloupe, honeydew melon, raspberries, tangelos

Additional Resources on Farm-to-School Programs

Information Clearinghouses

The **Center for Food and Justice**, a division of the Urban and Environmental Policy Institute at Occidental College in Los Angeles, CA, maintains links to topical press articles and timely research on national farm-to-school activities on its “Farm to School” website, located at www.farmtoschool.org. The mission of the Center for Food and Justice is to promote sustainable and socially just food systems by engaging in collaborative action strategies, community capacity-building, research and education.

The **Community Food Security Coalition (CFSC)**, a non-profit organization based in Venice, CA committed to building strong, sustainable, local and regional food systems, maintains an extensive array of resources on farm-to-school programs, including publications, case study examples, and information on funding possibilities, on its “Farm to School” program website, accessible at http://www.foodsecurity.org/farm_to_school.html. Through the leadership of its National Farm-to-School Program Director, Marion Kalb, the Coalition also offers direct technical assistance to individuals and groups interested in starting farm-to-school projects in their communities. For further information, please contact Marion Kalb, CFSC's Farm to School Program Director by e-mail at Marion@foodsecurity.org or by telephone at 530-756-8518, ext. 32.

The **Cornell University Farm to School Program** develops strategies and disseminates information to increase the amount of locally grown food served in New York's schools, colleges and universities. Information featured on Cornell's Farm to School Program website includes practical tips about initiating connections with local farmers and schools, examples of successful farm-to-school marketing and educational programs at the elementary, middle and secondary school level in New York State, an overview of regulatory and legislative requirements affecting school meal preparation, and a directory of available local foods. The website may be accessed at <http://www.cce.cornell.edu/farmtoschool/index.htm>.

FoodRoutes is a national nonprofit organization dedicated to reintroducing Americans to the origin of their food—the seeds it grows from, the farmers who produce it, and the routes that carry it from the fields to our tables. As part of its ongoing effort to build local, community-based food systems, FoodRoutes has dedicated a section of its website to the growing farm-to-school movement. This portal offers instant access to an extensive library of published reports on farm-to-school activities, and may be found at www.foodroutes.org/farmtoschool.jsp.

The **U.S. Department of Agriculture's Agricultural Marketing Service (USDA/AMS)** maintains a website devoted to marketing channel research and development, which features several publications that examine the growing importance of schools as a market outlet for local agricultural products, and offer tips and strategies to producers and school foodservice personnel alike to enhance the success of farm-to-school marketing and procurement. The website may be accessed at <http://www.ams.usda.gov/tmd/MSB/MarketingChannels.htm>.

For further information about USDA/AMS farm-to-school resources, please contact Debra Tropp, Team Leader, Market Channel and Postharvest Research and Development, Marketing Service Branch, USDA Agricultural Marketing Service by e-mail at Debra.Tropp@usda.gov or by telephone at 202-720-8317.

Research Reports and Planning Guides

Bringing Local Food to Local People: A Resource Guide for Farm-to-School and Farm-to-Institution Programs, Barbara C. Bellows, Rex Dufour and Janet Bachmann, Appropriate Technology Transfer for Rural Areas (ATTRA), Fayetteville, AR, October 2003, 28 pages.

This handy reference tool identifies potential sources of funding and technical assistance for farm-to-school marketing from government and non-government sources, examines the impact of 2002 Farm Bill legislation on the development of farm-to-school programs, recommends strategies to enhance the likelihood of successful project implementation, and provides a comprehensive list of contacts and information about ongoing farm-to-school marketing activities across the country. The free guide may be retrieved electronically at <http://attra.ncat.org/attra-pub/PDF/farmtoschool.pdf> or may be obtained by calling the following toll-free number, 1-800-346-9140.

Farm-to-Cafeteria Connections: Marketing Opportunities for Small Farms in Washington State, Kelli Sanger and Leslie Zenz, Small Farm and Direct Marketing Program, Washington State Department of Agriculture (WSDA), November 2003, 86 pages.

Developed for use in the State of Washington, this handbook provides customized guidance to farmers, food service buyers and community organizers alike on how to enhance procurement of locally grown farm products by schools and other food service institutions. Among other issues, the handbook evaluates the comparative cost of serving locally produced foods versus alternative food sources, provides recommendations on how to identify sources of locally grown farm products, discusses legal requirements involved in sourcing food products directly from farms, and offers insights about how to incorporate local foods in school menus. The handbook also includes case studies of several successful farm-to-school and farm-to-cafeteria programs in Washington State, Iowa and Wisconsin. Copies of the free handbook may be downloaded from the WSDA Small Farm and Direct Marketing Program website at <http://agr.wa.gov/Marketing/SmallFarm/102-FarmToCafeteriaConnections-Web.pdf> or may be obtained by contacting Kelli Sanger, Coordinator of WSDA's Small Farm and Direct Marketing Program, at (360) 902-2057, or at smallfarms@agr.wa.gov.

Farm to School: An Introduction for Food Service Professionals, Food Educators, Parents and Community Leaders, Alison Harmon, et al., 2003, 73 pages.

This manual is designed to introduce school food service professionals and other interested community members to the benefits of using regional and seasonal foods in school meal programs. It addresses the contribution of farm-to-school programs to the development of sustainable local food systems and the achievement of nutritional goals, provides technical guidance on establishing direct procurement programs between schools and local farmers, and shares valuable insights from participants in farm-to-school projects from California, Florida, Kentucky, Iowa, New Mexico, New York and Pennsylvania. Copies of the manual may be retrieved electronically from the Center for Ecoliteracy website at <http://www.ecoliteracy.org/pages/rethinking/downloads/FarmtoSchoolGuide1.pdf>, while published copies of the manual may be obtained for \$12.00, plus \$4.00 for shipping and handling, from the Community Food Security Coalition. Checks and money orders should be made payable to the Urban and Environmental Policy Institute (UEPI) at Occidental College, and should be sent to [Sandra Ramirez](mailto:Sandra.Ramirez@uepi.org), UEPI, Occidental College, 1600 Campus Road, Los Angeles, CA, 90041.

Fresh From the Farm. . .And Into the Classroom: A Los Angeles Unified School District Pilot Project, Margaret Haase, Andrea Azuma, Robert Gottlieb, and Mark Vallianatos, Center for Food and Justice, Urban and Environmental Policy Institute, Occidental College, January 2004, 26 pages.

The report evaluates the impact of an educational program carried out at more than 40 school sites within the Los Angeles Unified School District during the 2002-2003 school year, which attempted to create a unique hands-on learning experience for schoolchildren through a direct connection between classrooms and an organic farm in Southern California. Activities sponsored through the program included class lectures by farmers and/or field trips that provided information about how food is grown, along with classroom tasting and sample programs that introduced schoolchildren to unfamiliar fruits and vegetable items/varieties. These programs were incorporated into lesson plans on health, nutrition, cooking/food preparation, agriculture, and environmental education. The report contains extensive feedback from educators about their level of satisfaction with the pilot project, along with an analysis of the challenges involved in establishing permanent funding for this type of educational endeavor. Electronic copies of the report are available for free from the Center for Food and Justice website at <http://departments.oxy.edu/uepi/cfj/ReportFINAL.pdf>.

From Asparagus to Zucchini: A Guide to Farm-Fresh, Seasonal Produce, Madison Area Community Supported Agriculture Coalition (MADSAC), Madison, WI

Although this guide originally was developed to provide information to participants in Community Supported Agriculture projects, it includes 135 pages of vegetable information and seasonal recipes of practical interest to school food service personnel. Published copies of the guide may be purchased for \$19.00 from the Wisconsin Rural Development Center, 4915 Monona Dr., Suite 304, Monona, WI 53716, Phone 608-226-0300, Fax 608-226-0301.

Get Fresh Get Local, Kelly Erwin (consultant to the Massachusetts School Food Service Association), June 2004, 15 pages.

This report, funded by a grant from the Massachusetts School Food Service Association (MSFSA), analyzes the results of pilot farm-to-school programs carried out between September 2003 and June 2004 by MSFSA at five separate school districts throughout the state of Massachusetts (Belchertown, Hudson, Maynard, Middleboro and Worcester), representing a diverse range of rural, suburban and urban communities. The report examines the current status of local food procurement initiatives at each school district, provides an overview of next step strategies being considered by these school districts, offers examples of educational programming and foodservice training that can be used to successfully complement local purchasing activities, and shares recommendations for encouraging greater school food service and farmer participation in local farm-to-school marketing campaigns. Copies of the report may be obtained for \$6.00 apiece by contacting Kelly Erwin in Amherst, MA by phone at (413) 253-3844 or by e-mail at kelerwin@localnet.com.

Healthy Farms, Healthy Kids: Evaluating the Barriers and Opportunities for Farm-to-School Programs, Andrea Misako Azuma and Andrew Fisher, Community Food Security Coalition, Venice, CA, January 2001, 62 pages.

This detailed policy backgrounder explores the impact of commercial/branded foods on the state of child nutrition, and discusses how farm-to-school programs have the potential to foster healthier dietary habits among schoolchildren and enhance community access to affordable food supplies. The document includes case studies and lessons learned from several farm-to-school marketing projects in California, Connecticut, Florida, Kentucky, New York and North Carolina. Published copies of the document may be ordered on-line for \$12.00 (plus \$4.00 for shipping and handling) from the Community Food Security Coalition web site at <http://www.foodsecurity.org/memberinfo.html>.

How Local Farmers and School Food Service Buyers Are Building Alliances; Lessons Learned from the USDA Small Farm/School Meals Workshop, May 1, 2000, Debra Tropp and Surajadeen

Olowolayemo, Transportation and Marketing Programs, USDA Agricultural Marketing Service, December 2000, 30 pages.

This report summarizes the educational highlights of a technical workshop on farm-to-school marketing held in Georgetown, KY with the support of the Kentucky Department of Agriculture, the University of Kentucky's Cooperative Extension Service, and USDA's Agricultural Marketing Service and Food and Nutrition Service. Topics addressed in the report, based on presentations made at the conference, include the importance and benefits of farm-to-school marketing, product preferences in school food service, factors that influence vendor selection by school food service buyers, and case studies of successful farm-to-school marketing programs in California, Florida, Kentucky and North Carolina. Supplemental information offered in the report includes a section on available government assistance for farm-to-school programs, and a marketing checklist for farmers and school food service directors interested in getting involved in farm-to-school activities. Electronic copies of this free report may be retrieved from the USDA Agricultural Marketing Service's Marketing Service Branch website at <http://www.ams.usda.gov/tmd/MSB/PDFpubList/localfarmsandschool.pdf>, and published copies of the report may be requested by contacting Debra Tropp, Team Leader, Market Channel and Postharvest Research and Development, Marketing Service Branch, USDA Agricultural Marketing Service by e-mail at Debra.Tropp@usda.gov or by telephone at 202-720-8317.

Innovative Marketing Opportunities for Small Farmers: Local Schools as Customers, Daniel P. Schofer, USDA Agricultural Marketing Service, Glyen Holmes, USDA Natural Resources Conservation Service, Vonda Richardson, Florida A&M University, and Charles Connerly, West Florida Resource, Conservation and Development Council, February 2000, 51 pages.

This report documents the successful efforts of a small minority-owned farm cooperative in northern Florida to create new markets for its agricultural production between 1997 and 1999 by delivering fresh-cut leafy green vegetables, fresh berries, and fresh melons to local school districts. Information supplied in the report includes valuable step by step insights as to how this cooperative was able to bring its strategic business plan to fruition by working collaboratively with individual school food service directors and local representatives of the Department of Defense's Defense Subsistence Office. Electronic copies of this free report may be retrieved from the USDA Agricultural Marketing Service's Marketing Service Branch website at <http://www.ams.usda.gov/tmd/MSB/PDFpubList/localfarmsandschool.pdf>, while published copies of the report may be requested by contacting Debra Tropp, Team Leader, Market Channel and Postharvest Research and Development, Marketing Service Branch, USDA Agricultural Marketing Service by e-mail at Debra.Tropp@usda.gov or by telephone at 202-720-8317.

Linking Farms with Schools: A Guide to Understanding Farm-to-School Programs for Schools, Farmers and Organizers, Marion Kalb, Kristen Markley and Sara Tedeschi, 2004

This guide details the benefits, challenges, and strategies for success for building successful farm-to-school projects and includes case studies of innovative projects and an extensive resource list. A useful guide for farmers, food service, and organizers, it addresses both purchasing and supply issues, as well as food safety, product cost, and developing programs in colder climates. Sample surveys for both food service directors and farmers are also included. Published copies may be ordered on-line for \$7.00 (plus \$4.00 for shipping and handling) from the Community Food Security Coalition web site at <http://www.foodsecurity.org/memberinfo.html>.

Local Food Connections from Farms to Schools, Mary Gregoire, Catherine A. Strohbehn and Jim Huss, Iowa State University Extension, 2000, 4 pages.

This pamphlet provides an overview of marketing and procurement considerations that often emerge when farmers attempt to market their farm products directly to local schools and offers recommendations for addressing these issues. Electronic copies of the pamphlet may be obtained for free from the website of Iowa State University's Extension program at <http://www.extension.iastate.edu/Publications/PM1853A.pdf>

Lunch Matters, by Dona Richwine, Nutrition Specialist, Santa Monica-Malibu Unified School District, Santa Monica, CA

This video and companion booklet, showcasing the Santa Monica-Malibu Unified School District's award winning lunch program, provides step by step instruction on how to start a farmers market salad bar in a school cafeteria. Addressed in the video and booklet are specific recommendations on how to successfully promote the concept of a farmers market salad bar with key school and community leaders, how to develop appropriate food purchasing and delivery procedures in cooperation with local farmers market managers, and how to calculate the amount of labor needed to operate an individual salad bar program. The booklet also includes several attachments that can be used as reference material by school food service personnel, including sample menus, a prospective equipment list, and examples of operational cost analyses, participation rate records and production records.

The video and booklet are available for a handling fee of \$5.00 to school districts and organizations that wish to start a farmers market salad bar. To place an order, please contact Dona Richwine at richwined@smmusd.org.

Oklahoma Farm-to-School Report, Oklahoma Food Policy Council (joint project of the Kerr Center for Sustainable Agriculture, the Oklahoma Department of Agriculture, Food and Forestry, and Drake University), January 2004, 36 pages.

The content of this report focuses on the results of a survey sent to foodservice buyers at 638 public institutions in Oklahoma (such as public elementary, middle and secondary schools, colleges, universities and correctional facilities) to ascertain their level of interest in purchasing locally-produced foods. Survey questions examined the contractual arrangements most typically used to procure foods at Oklahoma's public institutions, and the types of food commodities (produce, meat and dairy) most commonly purchased from both local and non-local sources. Researchers also sought to identify the primary issues that either encouraged or discouraged procurement of locally-produced foods by this foodservice segment, and

analyzed differences in purchasing behavior and preferences between larger and smaller institutions. Aside from containing an analysis of survey results, the report also contains background information on several successful farm-to-school marketing models, a nutritional profile of Oklahoma residents/households compared to the U.S. average, and a list of food items produced in Oklahoma. Electronic copies of the report may be downloaded for free from the Kerr Center for Sustainable Agriculture website at <http://www.kerrcenter.com/ofpc/farmentoschool.htm>, while published copies of the report may be ordered on-line from the Kerr Center at http://www.kerrcenter.com/HTML/pubform_farm_ranch.html for a \$2.00 shipping and handling fee for the first copy, and a \$1.00 shipping and handling fee for each additional copy.

Rethinking School Lunch, Center for Ecoliteracy, Berkeley, CA, 2004, 165 pages (includes 10 chapters, introductory sections, concluding section, and downloadable financial calculator tool).

This comprehensive web-based guide to enhancing school nutrition in school districts is the culmination of five years of research by the Center for Ecoliteracy and their project partners aimed at identifying the elements necessary to create integrated farm-to-school programs that incorporate nutritional, educational, community development, and environmental goals. Essays, interviews, tools and resources, divided into ten thematic chapters, are offered together to help a diverse array of stakeholders begin the process of envisioning and planning innovative school feeding programs that are designed to enhance the social and mental well-being of students, help improve student performance, and enable students and teachers to reconnect with their local communities in meaningful ways. Topics addressed by each of the guide's individual training modules include:

- Leadership, Policy and Change
- Curriculum Integration
- Nutrition and Health
- Finances
- Facilities Design
- Dining Environment and Experience
- Professional Development
- New Models of Procurement
- Waste Management
- Marketing and Communications

One of the unique tools found in the guide's Finances module is a downloadable financial calculator, which is designed to help food service directors obtain a clearer understanding of their expenses and revenue sources, and more accurately evaluate the financial impacts of incorporating fresh food and onsite meal preparation into school foodservice. The guide may be accessed electronically for free from the Center for Ecoliteracy website at <http://www.ecoliteracy.org/pages/rethinking/rethinking-home.html>.

School Foods Tool Kit: A Guide to Improving School Foods and Beverages, Claudia Malloy, Director of Grassroots Advocacy, Joy Johanson, MPH, Nutrition Policy Associate, and Dr. Margo Wootan, Director of Nutrition Policy, Center for Science in the Public Interest (CSPI), Washington, D.C., September 2003.

This toolkit is designed to help parents, teachers, school administrators, elected officials and others improve the nutritional quality of foods and beverages in their local schools through grassroots advocacy. While the themes addressed in the toolkit encompass a far broader range of nutritional issues than farm-to-

school activities, most notably the issue of competitive foods (those sold or served outside school meal programs), it contains an abundant quantity of reference material of interest to individuals looking to establish farm-to-school programs in their communities. The toolkit is comprised of three sections:

- ***How to Improve School Foods and Beverages***, which provides guidance on how to communicate messages related to improving child nutrition to decision-makers, and offers background information to illustrate how the growing influence of competitive foods in schools undermine the national investment in child nutrition programs
- ***Model Materials and Policies***, which features examples of model legislation, sample letters, and other reference materials that can be adapted for use by individual communities
- ***Case Studies***, which offers a comprehensive list of legislative and programmatic efforts to eliminate or reduce the presence of competitive foods in schools throughout the country

The School Foods Tool Kit may be downloaded at no cost from the CSPI website at <http://www.cspinet.org/schoolfood>, or may be ordered on-line via credit card for \$10.00 US or \$15 Canadian. To order a published copy of the toolkit by check or money order, interested buyers should download the publication order form from http://www.cspinet.org/schoolfood/orderform_toolkit.pdf, and send the form plus check or money order for \$10.00 US or \$15 Canadian to CSPI's School Foods Tool Kit
1875 Connecticut Avenue, NW, Suite 300,
Washington, DC 20009

“Taking it to the next level: Success of small Florida vegetable co-op leads to a network of similar cooperatives,” Rural Cooperatives magazine, U.S. Department of Agriculture, September-October 2002, 7 pages.

The article documents the recent business expansion strategies of the New North Florida cooperative, a small minority-owned cooperative based in Marianna, FL that received seed money from USDA in the late 1990's to initiate and carry out farm-to-school marketing activities in value-added produce. By piggybacking on the distribution network of other cooperatives, the New North Florida cooperative has been able to develop new markets for its products in nearby States, as well as expand the customer base for other small farm cooperatives operating in Alabama, Arkansas, Florida, Georgia, Louisiana and Mississippi. Electronic copies of the article may be retrieved for free from the USDA Rural Development website, located at www.rurdev.usda.gov/rbs/pub/sep02/sep02.pdf.

The Crunch Lunch Manual: A Case Study of the Davis Joint Unified School District Farmers Market Salad Bar Pilot Program and a Fiscal Analysis Model, Renata Brillinger, Jeri Ohmart and Gail Feenstra, Sustainable Agriculture Research and Education Program (SAREP), University of California at Davis, March 2003, 61 pages.

This manual provides an overview of the lessons learned during the operation of a “Farmers Market” salad bar program, featuring locally-sourced, seasonal fruits and vegetables, option, at selected schools in the Davis, CA Joint Unified School District over a two-year period. Designed to help school foodservice personnel and other key community stakeholders develop their own school-based “Farmers Market” salad bar programs, the manual focuses on the incremental steps involved in incorporating locally grown fresh fruits and vegetables into school foodservice menus. The first three chapters of the manual examine the

specific requirements of salad bar programs at each stage of development, including the start-up phase of program planning, fundraising and organization, the intermediate phase of program implementation, and the final phase of program expansion/institutionalization. Readers are also offered tools for assessing the “readiness” of school district participation in a farm-to-school program, and detailed guidance on how to assess the financial viability of a planned or ongoing salad bar program by generating profit/loss statements and calculating “breakeven” points for program operations. The manual concludes with a listing of resources for farm-to-school programs and food policy. Copies of the manual can be retrieved electronically from the SAREP website at <http://www.sarep.ucdavis.edu/cdpp/farmtoschool/crunchlunch32003.pdf>

The Farmers’ Market Salad Bar: Assessing the First Three Years of the Santa Monica-Malibu United School District Program, Michelle Mascarenhas and Robert Gottlieb, Community Food Security Coalition, 2000, 24 pages.

This booklet describes the results of a pilot salad bar program initiated by Occidental College’s Community Food Security Project in the Santa Monica-Malibu Unified School District. It evaluates student participation rates in the Farmers’ Market salad bar program (featuring locally-grown farm products) versus alternative meal options at several elementary schools, analyzes the cost of implementing the program, examines various ways of boosting interest in salad bar programs from students, school personnel and community members, and discusses some of the budgetary and logistical challenges involved in maintaining a successful Farmers Market salad bar program.

Appendix A: Memo Regarding "Purchases of Locally Produced Foods" in 2002 Farm Bill

May 16, 2002

SUBJECT: Purchases of Locally Produced Foods in the School Nutrition Programs

TO: Regional Directors
All Regions
Special Nutrition Programs

Section 4303 of the Farm Security and Rural Investment Act of 2002 adds a new paragraph (j) at the end of section 9 of the Richard B. Russell National School Lunch Act pertaining to purchases of locally produced products. The provision requires the Secretary to encourage institutions participating in the school lunch and breakfast programs to purchase locally produced foods, to the maximum extent practicable.

We are asking you and your State agencies to encourage school food authorities participating in the National School Lunch and School Breakfast Programs to purchase locally produced foods, to the maximum extent practicable, along with other foods. This provision does not absolve school food authorities of their obligation to adhere to all applicable procurement requirements. School food authorities should be reminded that all purchases must be made competitively, consistent with Federal and State procurement laws and regulations. Purchases of this type would generally qualify as small purchases under procurement requirements and therefore may be procured using informal procedures. School food authorities should check with their administering State agency to determine appropriate small purchase requirements and with their State Department of Agriculture for more information on locally produced foods.

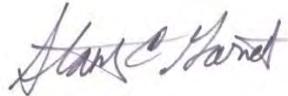
This is a good time of year to encourage the purchase of locally produced products and to encourage the planning for next school year's purchase of such products. Most regions in the country have an abundance of locally produced fruits, vegetables, herbs and nuts to enhance the meals served to children. Additionally, studies by the U.S. Department of Health and Human Services, U.S. Department of Agriculture (USDA), and the National Academy of Sciences suggest that due to the phytochemical content of fruits and vegetables, as part of a diet that is low in fat, saturated fat and cholesterol and that contains plenty of whole-grain breads and cereals, may decrease the risk of heart disease and cancer. Since a variety of fruits and vegetable can be purchased locally, this fits into our overall goal of providing nutritious, well-balanced meals to children.

In the summer of 1997, USDA began a comprehensive effort to connect small farms to the school meal programs. The "farm to school" initiative encourages small farmers to sell fresh fruits and vegetables to schools and encourages schools to buy this wholesome

Page 2

produce from small farmers. A copy of "Small Farms/School Meals Initiative", a step by step guide on how to bring small farms and local schools together, is available to assist you in your efforts to purchase locally produced foods at www.fns.usda.gov/cnd/Lunch/SmallFarms/small.pdf.

If you have any question, please contact Mary Jane Whitney at (703) 305-2590.

A handwritten signature in cursive script that reads "Stanley C. Garnett".

STANLEY C. GARNETT
Director
Child Nutrition Division

Appendix B: Success Stories

Farm to School programs incorporate healthy, nutritious, farm products into school lunches, snacks and salad bars. According to established farm to school projects, farm fresh fruits and vegetables rank among students' favorite meal options, especially in elementary and middle schools. When combined with nutrition education, farm visits, school gardens, and education in the classroom, children can develop healthy eating habits that will last a lifetime. In doing so, they can decrease the risk of experiencing food related diseases such as obesity, diabetes, hypertension and heart disease. Farm to School also enhances the local economy by providing a new outlet for locally-produced foods.

Here are some examples to generate ideas as you begin exploring Farm to School possibilities in your area:

California

A UCLA study conducted on a sample of 195 children from three elementary schools in the LA Unified School District revealed that the average fruit and vegetable consumption by children increased by one serving /day over a period of two years, a change attributed to the "Farmers Market Salad Bar" in the school cafeteria. The salad bar served fresh fruits and vegetables sourced from a local farmer's market. Other significant nutritional benefits included a reduction in average calorie intake by 200 calories/day and fat intake by 11gm/day after the salad bar was introduced. Students enjoyed the fresh, healthy and tasty salads, increasing participation in the free and reduced meals offered through the National School Lunch Program. The project was facilitated by the Center for Food and Justice, Occidental College (then called Community Food Security Project) which also conducted farm tours, taste testings, and nutrition education sessions for students, teachers, and parents.

New Mexico

In New Mexico, local farms' foods are featured throughout the menus in Santa Fe Public Schools. With the help of the project's coordinator, who is a chef, the director of Student Nutrition Services was inspired to develop a farm to school program to help kids enjoy the flavor and quality of locally grown fresh fruits and vegetables. Starting in three schools, the program has now expanded to six elementary schools and one high school.

The state Department of Agriculture and the state Farmers Marketing Association located interested farmers. Approximately forty farmers sell to the school district, primarily through a farmers coop. Farm crops include salad greens, sunflower sprouts, apples, watermelons, cantaloupes, tomatoes, potatoes, onions, carrots, broccoli, corn, cucumbers, peppers, squash, sweet potatoes, pears and radishes. Most products are available only during spring and fall. However, salad greens grown under cover are now available throughout most of the winter. Sunflower sprouts are a big hit with the kids and are used district-wide, as are locally grown watermelons, apples, and sweet potatoes. Deliveries are made directly to the school sites or to the central warehouse.

Two of the elementary schools have a salad bar every day. Lunches at these sites include a meat entree three times a week and a vegetarian item twice a week. The other elementary schools offer a side salad of

mixed greens, sunflower sprouts, and other seasonal items with lunch. The high school has a separate salad bar; students have the choice of the salad bar or a hot lunch.

Nutrition education in the classroom has had a positive impact on participation in the salad bar line. The Farms to Schools Coordinator facilitated discussions about proper salad bar etiquette as well as what is required for a reimbursable meal under the National School Lunch Program. Food service staff brought the salad bar into the classroom for a hands-on lesson about food groups and portion sizes. The students were then able to prepare a lunch from the salad bar, practicing what they learned.

New York

In New York State, the Cornell Farm to School Program supports and monitors pilot projects in two school districts and works with many other constituencies to further farm to school efforts and increase awareness of and support for farm to school activities in New York. A prime focus has been on building statewide coalitions and increasing awareness through communication about farm to school and providing resources to enable the initiation of additional projects. In Hannibal and Johnson City, the two pilot project school districts, food service directors have purchased greater amounts of local produce in each succeeding project year. During school year 2001-02, Hannibal purchased \$3,724 worth of 12 different NY-grown produce items. In school year 2002-03, Hannibal purchases increased to \$3,912.45 worth of 21 different items. Johnson City purchased \$1,522.45 worth of six different produce items during school year 2001-02, and \$1,6,37.25 worth of eight different items during school year 2002-03.

Food service directors and staff members emphasize that the produce from local farmers is of excellent quality and taste, and competitive in price. In Johnson City, the director buys directly from one farmer; in both districts, directors are also able to obtain local items through their produce brokers. During the fall months, apples, pears, plums, watermelon, tomatoes, broccoli, cauliflower, onions, peppers, cucumbers, cabbage, carrots, potatoes, and lettuce are served to students. Although vegetables were previously bought chopped and bagged, the directors agreed to buy whole New York grown cauliflower and broccoli and chop them in-house. New York cabbage, onions, apples, and dried kidney or black beans are also purchased during the winter months.

A New York State Farm to School Law, is making it easier for schools to purchase local products. The law established an annual NY Harvest for NY Kids week which takes place every fall and connects students to farms through visits to farms and farmers' markets, meals featuring NY foods, and other farm-school activities. The Johnson City and Hannibal schools, as well as many other schools throughout the state, participate in NY Harvest for NY Kids week.

A Statewide Farm to School Coordinating Committee, established in 2003, provides statewide leadership for farm to school initiatives, established and implements short- and long-term goals, identifies needs, and develops strategies for making sustainable farm-school connections. The committee includes wide representation from commodity organizations, state departments of health, education, and agriculture, community food and agriculture organizations, food service associations at K-12 and college levels, and cooperative extension associations. An active NY Farm to School Listserv enables members to share experiences, ideas for programs and activities, recipes, sources for NY products and much more. See the Cornell Farm to School Program website (www.cce.cornell.edu/farmentoschool) for many more details about these efforts.

Wisconsin

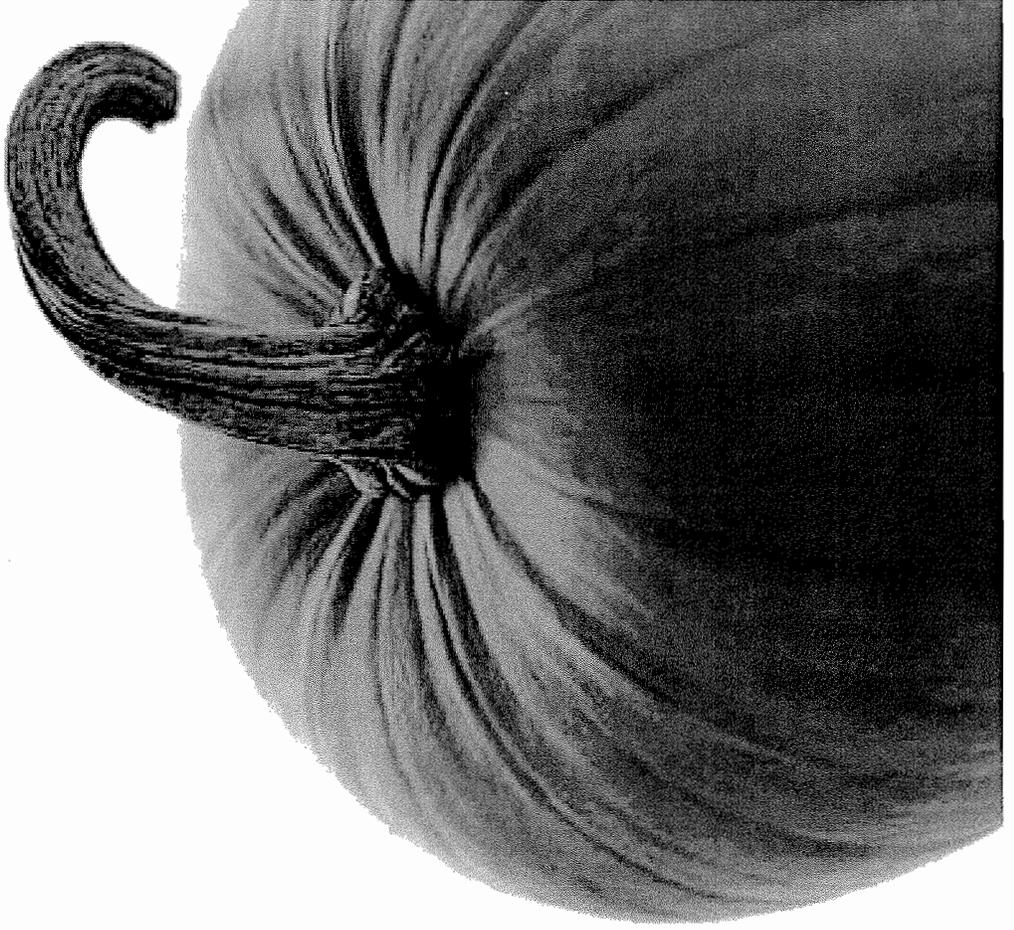
Madison Metropolitan School District is in its second year of offering a farm to school program in three of its elementary schools. Thanks to the food service coordinator's determination, the program continues in spite of the challenges implementing farm to school in a large school district. Wisconsin's program began as a pilot project initiated through the University of Wisconsin-Madison, integrating classroom education, farm visits, Wisconsin-grown products offered in the cafeterias, parent newsletters, and special festival dinners involving the whole school.

In addition to working with farm co-ops, the child nutrition director has encouraged more farmers to participate in the DoD fresh produce program. Because the district needs produce that is pre-washed, pre-cleaned, pre-cut, etc, the biggest challenge is finding processors who can provide produce in that form. In spite of the challenges, the director wants to expand the program, hopefully by extending the grant for another two years. She has noticed that students who are reluctant to taste vegetables are more willing to accept them in the schools that feature the education program.

Procurement

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RETHINKING SCHOOL LUNCH GUIDE



Rethinking School Lunch — a project of the **Center for Ecoliteracy**
2528 San Pablo Avenue, Berkeley, California 94702. www.ecoliteracy.org

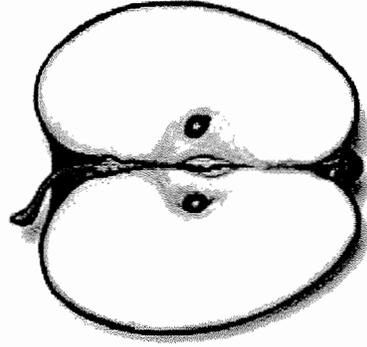
Procurement

RETHINKING SCHOOL LUNCH GUIDE

FOOD FOR THOUGHT

“Locally produced food purchased directly from the farmer [may be] more affordable than the same item purchased at the grocery store or from a distributor. In the case of direct purchase, the farmer is receiving the mark-up that the grocery store would have received.... Purchasing from farmers’ markets or farm stands, or through special contracts between farmers and buyers, makes locally grown food more affordable for the buyer and more profitable for the farmer.”

— Janet Brown, program officer for food systems, Center for Ecoliteracy



WHAT'S INSIDE?

RETHINKING PROCUREMENT: The goal, the challenge, and some key points to remember.

FIVE SUCCESSFUL MODELS OF PROCUREMENT: It's already happening. Janet Brown, program officer for food systems, Center for Ecoliteracy, discusses five procurement systems developed and used by school districts.

PROCUREMENT RESOURCES: Thinking of buying fresh food locally? Learn more about procurement strategies, visit websites for local food systems programs, learn about national and international food networks, and read research and reports on food purchasing.

RETHINKING PROCUREMENT

The Goal *To implement the farm-to-school model by finding practical ways to keep the school lunch program supplied with fresh, seasonal, sustainably grown produce and products, and by building partnerships between the school district and local family farms.*

The Challenge *Developing innovative strategies to purchase fresh, seasonal, sustainably grown ingredients from local farms.*

.....

The vast majority of schools in the United States rely on a relatively simple method of procurement: They use menus that assume all ingredients will be available at all times of year, they buy from large, central suppliers, and they take at least 90 to 120 days to pay from invoice.

Moving to the farm-to-school model — which relies on buying fresh, locally grown, seasonably available foods from smaller family farmers — can take some work. Relying on local sourcing means locating and establishing relationships with a number of local farmers, because a single family farm may not be able to meet all of the district's food needs. Farmers will also need significant lead time to plan for production, and they are probably unaccustomed to waiting three or four months for payment.

Building these bridges will take thought, time, and dedication. But, as a number of school districts nationally and internationally have learned, it can be done successfully.



KEY POINTS

Local Sourcing Supports Classroom Lessons

Most urban children know that food doesn't really come out of a box. But many are unfamiliar with all the steps involved in bringing food from the field to the table, and few have ever set foot on a farm. When the school curriculum includes experiences in school gardens and kitchen classrooms and on local farms, it helps demonstrate and embed the lessons learned in the classroom and during the lunch period.

Classroom lessons can reinforce connections between the food served at school and human and environmental health. Farm field study trips can provide vital experiences that help students understand the connection between fresh food and lifelong healthy eating habits. Food miles — the distance food travels from field to table — is an important concept in sustainability models, and one that students can begin to consider in connection with the meals they eat in school and at home. These connections are part of the foundation of attitudes and behaviors regarding healthy food and eating habits.

Procurement Changes and Menu Changes Work Together

When procurement methods and ingredients change, these changes naturally affect menus. Serving high-quality, seasonal, fresh produce to students at lunch every day is an effective way to promote consumption of fresh fruits and vegetables, and an exciting opportunity to create new, inviting menus. These new menus can incorporate not just local ingredients but local tastes and cultural preferences. Design menus flexibly to accommodate fluctuations in availability of regional, seasonal produce.

District Policies Can Strengthen Children's Health and Local Economies

District food policies return authority for decisions affecting children's health and diet to the parents and the community. These policies are tools that emphasize the importance of students' understanding about how food reaches the table and the implications this has for their future.

District policies strengthen local economies when they prioritize local procurement to the greatest extent possible. These policies play a role in preserving greenbelts and open space through directing more public dollars in the school lunch program toward support of local sustainable agriculture and family farms.

District policies hold the potential to make students, and the greater community, aware of the importance of sharing food as a cultural and community-building tool. Through the school lunch program, schools and farms can recognize and share responsibilities for the health and well-being of the communities they serve.

Local Sourcing Encourages Sustainable Patterns of Living

In the United States, produce bought from local farmers travels an average of about 45 miles from field to table. In contrast, food items bought from conventional sources travel an average of about 1,500 miles. Janet Brown, program officer for food systems, Center for Ecoliteracy, explains, "Moving the field closer to the table has been cited as a major step toward more sustainable patterns of living. Eating locally grown food reduces dependence on nonrenewable

sources of energy and is a primary strategy for preserving farms on the urban fringe.”

The inclination on the part of school districts to connect to local agriculture is founded in common sense. Students will enjoy healthy meals prepared from fresh, wholesome, delicious food that is grown with the school district in mind. Farms will benefit from connections to a steady market for foods that grow well in their region. It makes sense to feed schoolchildren first from those farms closest to the school district, and to direct the public dollars in the school food program toward preserving farming as a way of life in the region.

Planning school menus to take advantage of locally grown produce and products often saves the district money, helps the local economy, and allows students to better understand human nutrition, seasons, cycles, and the bioregion. Schools represent a reliable and steady demand for produce and products that can sustain small-scale local farmers.

Five Models of Local Procurement Are Already in

Use As school districts move in the direction of fresh local purchasing, five models of procurement for lunch programs have emerged (see “Five Successful Models of Procurement” in this section for the details):

1. The school district facilitates direct purchase between food services and farmers.
2. The school district uses a “forager” to act as a go-between to facilitate purchasing.
3. The school district arranges for purchase through local farmers’ markets.

4. The school district enters into a “contract-growing” arrangement with farmers.

5. The school district sources locally grown food through a distributor.

Beginning to Think About Local Sourcing Building new relationships with local farmers is a guaranteed eye-opener for administrators, educators, and parents. If you are thinking about making local sourcing a part of your school district’s food policy, meeting farmers and talking about the practicalities is the best place to begin.

Visit local farms to collect information and make connections.

- **Farm tours, farm maps, county extension service,** the agricultural commissioners office, farmers’ markets, and the farm bureau are good places to begin collecting contact information.
- **School administrators, educators, and interested parents** and students can also begin to meet and build working relationships with local farmers at specially organized events designed to help each partner learn more about the other.
- **Connections to farms can assist and inspire** food service personnel in making the shift from processed and packaged food to meals prepared from fresh, whole ingredients.
- **Even when the school curriculum does not yet include nutrition education** and the local food system as a context for learning, visits to farms in conjunction with curriculum connections provide enrichment opportunities for students.

Developing farm-to-school relationships is a full-time job:

- **Nancy May, food service supervisor for the Healdsburg (California) Unified School District**, has worked with seven or eight farmers over the past three years. She began simply, by calling farmers on the phone and letting them know the school district was interested in purchasing fresh local products.
- **Because produce is seasonal**, schools will not be working with the same farmers on a year-round basis. It's important to set up a solid relationship with different farmers that can continue from year to year

- **Although “local sourcing” generally refers to purchasing** food products from local farmers, in some communities “local” may mean up to a 300-mile radius.
- **Farmers usually plan a year or more ahead of delivery**, and plant months in advance, so prepare for a longer fulfillment cycle. And take time to work out the nuts and bolts of your procurement plan: Know how many farms it will take to feed the school district, if decreased food costs will offset increased labor costs, how deliveries will be facilitated, and what payment models will work for both districts and the farms.

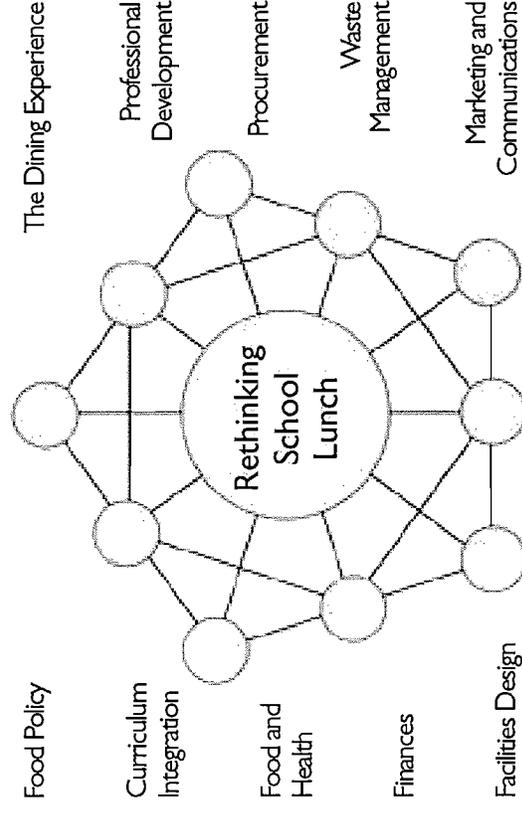
RETHINKING SCHOOL LUNCH Web of Connections

This document is part of a comprehensive **Center for Ecoliteracy** project that provides helpful information on topics related to redesigning school lunch programs.

The diagram illustrates our systems approach to integrating school lunch programs with curriculum, improving student health and behavior, and creating sustainable communities.

School administrators, food service directors, teachers, and parents will each approach this project from their unique perspective. Readers can begin with the topic that interests them most, then explore the other related topics.

The entire Rethinking School Lunch project is available at: www.ecoliteracy.org/rethinking/rsl.htm



Is Fresh Best?

I. Quality in Fresh Fruits and Vegetables

Quality can be viewed in terms of four basic characteristics of food:

- Color or eye appeal
- Odor and flavor
- Texture or feel
- Nutritive value

The first three can be evaluated with human senses and have the greatest chance of being at their peak if the product is allowed to ripen fully, is handled carefully after harvest, and reaches the consumer in the shortest time possible. This situation is most probable when produce is consumed near the place it is grown.

Because people are more likely to consume fresh fruits and vegetables when they are of high quality, locally produced fresh foods stand to improve the nutritional quality of *total dietary intake* regardless of differences in nutrient content of a particular fruit or vegetable per se.

Source: Jennifer Wilkins, PhD. R.D. Senior Extension Associate, Division of nutritional Sciences, Cornell University. Email Sept. 9, 2002

II. Comparison of key nutrients in fresh fruits and vegetables vs. frozen and canned

Summary: One cannot say in every instance that fresh produce is more nutritious than frozen or canned—it depends on the nutrient as well as the food item. Nutrient content also varies depending on how well the fresh produce is handled post-harvest.

However, in a comparison of key nutrients in five vegetables using USDA standard nutrient tables, the fresh cooked vegetables had highest amounts of seven key nutrients most often (14 instances), followed by raw vegetables (11 instances).

Frozen vegetables had highest amounts of the key nutrients in just six instances, followed by canned vegetables with four instances.

In a comparison of the key nutrients in three fruits, the raw fruits had higher nutrients much more often (17) compared to frozen (8).

The commonly used forms of each vegetable and fruit (examples: fresh raw, fresh cooked, canned and frozen) were compared.

The seven key nutrients measured are vitamins A, C and E, calcium, magnesium, potassium and beta-carotene. These, along with fiber, are nutrients the USDA's 2005 Dietary Guidelines for America have identified as important but lacking in American diets.ⁱ

Excepting for potassium, a majority of Oklahomans are currently not meeting the recommended intake of these important nutrients.

The five vegetables compared can all be grown in Oklahoma: green beans, tomatoes, carrots, broccoli, and spinach. The three fruits analyzed were strawberries, blackberries, and blueberries, commonly grown in the state.ⁱⁱ

Analysis of results per food item:

Green beans (comparing raw, fresh cooked, canned, frozen):

Fresh cooked - highest in 5 of 7 nutrients (Vit. A, C, E, potassium, beta-carotene)

Frozen - highest in 2 nutrients (calcium and magnesium)

Tomatoes (raw, fresh cooked and canned):

Raw - highest in 3 of 7 nutrients (Vit. A, Potassium, Beta-carotene), next highest in 1 of 7 (Magnesium)

Fresh cooked - highest in 1 of 7 (Vitamin C)

Canned - highest in 3 of 7 (Vit. E, calcium, magnesium)

Carrots (raw, fresh cooked, canned, frozen):

Raw - highest in 3 of 7 nutrients (Vit. A, Mag., Potassium), next highest in 4 of 7 nutrients (Vit.A, C, Calcium, Beta carotene)

Fresh Cooked - highest in 3 of 7 nutrients (Vit.A, E and Beta carotene)

Canned - lowest in 5 of 7 nutrients (Vit. A, Ca, Mg, K, Beta carotene)

Frozen - highest in 1 of 7 (Calcium), 2nd highest in 2 of 7 (Vit. E, Magnesium)

Broccoli (raw, cooked, frozen)

Raw - highest in 3 of 7 (Vit.C, Ca and K) and tied for 1st in 1 of 7 (Magnesium)

Fresh Cooked - highest in 3 of 7 (Vit.A, E, Beta carotene) and tied for 1st in Magnesium

Frozen - lowest in 4 of 7 (Vit.C, E, K, magnesium)

Spinach (raw, fresh cooked, canned, frozen)

Raw - highest in 1 nutrient (potassium)

Fresh cooked - highest in 2 of 7 nutrients (magnesium, beta-carotene)

Canned - highest in 1 of 7 nutrients (vit. C)

Frozen - highest in 3 of 7 nutrients (Vit. A, Vit. E, calcium)

Strawberries (raw, frozen)

Raw - highest in 3 of 7 nutrients (Vit.C, Magnesium, K) and tied with frozen in 2 of 7 (Vit.E, Calcium)

Blackberries (raw, frozen)

Raw - highest in 4 of 7 nutrients (Vit.A, C, K, Beta carotene) and tied with frozen in 2 of 7 (Vit.E, Ca).

Frozen - highest in 1 (vit. A)

Blueberries (raw, frozen)

Raw - highest in 6 of 7 nutrients (Vit.A, C, E, Mg, K, Beta carotene).

Frozen - highest in 1/7 (calcium)

ⁱ Based on dietary intake data or evidence of public health problems, intake levels of the following nutrients may be of concern for:

Adults: calcium, potassium, fiber, magnesium, and vitamins A (as carotenoids), C and E.

Children and adolescents: calcium, potassium, fiber, magnesium, and vitamin E.

U.S. Department of Health and Human Services and U.S. Dept. of Agriculture, 2005. Dietary Guidelines for Americans. HealthierUS.gov

<http://www.health.gov/dietaryguidelines/dga2005/document/>

ⁱⁱ U.S. Department of Agriculture, Agricultural Research Service. 2005. USDA National Nutrient Database for Standard Reference, Release 18 Nutrient Lists. Nutrient Data Laboratory Home Page, <http://www.ars.usda.gov/ba/bhnrc/ndl>

Section 3

The Food Connection

- The Oklahoma Food Connection 2006: A Directory of Agricultural Producers, Crops and Institutional Buyers (inserted in rear cover)
- Things to consider when working with farmers
- Food Connection Activity Sheet
- Sample letter to a farmer
- Weights and Yields of Fruits and Vegetables

Things to Consider When Working with Farmers*

Farmers are out standing in their fields - literally. Particularly during the summer months, many farmers are in their fields or marketing their crops from sun up to sun down. You may want to try calling early in the morning, or later in the evening.

Crops and their availability differ throughout the state. Ask farmers when their crops are in season, and what amounts might be available to sell to schools. When considering a new market, such as sales to schools, farmers may want to start with one or two crops to see how the system works.

Some farmers have a great deal of experience working directly with prospective buyers – others have very limited experience. Farmers who sell at farmers' markets, restaurants and other established marketing outlets may be more likely to work within your specifications and restraints. However, these type farmers tend to produce on a small, labor intensive scale and may not be able to initially meet much more additional demand. Smaller operations often require prices higher than large farms, because they lack economies of scale.

Some farmers sell most or all of their products through brokers or on contract. These are normally large farms which produce high volumes of a few specific crops. These farmers, or their brokers, may be more inclined to work with larger school districts or cooperatives of districts, in order to move enough of their product(s). Due to their economies of scale, they may also be more able to accept lower prices paid by middlemen such as produce distributors who sell to schools.

Produce vendors who currently deliver your fresh fruits and vegetables might be interested in sourcing locally grown items. Some may already be doing this, but the challenge for distributors is to effectively notify you when this is happening, preferably with enough lead time to allow some related educational outreach in the classroom or cafeteria. Let them know if you need more information about their sources and/or if you need earlier notice when local items are coming.

Farmers do not generally deliver their product to markets on a daily basis. Farmers are more inclined to deliver to a central warehouse once or twice a week than to multiple schools every day. They sometimes have limited transportation and will look for the most efficient way to deliver their products.

Encourage farmers to work through a cooperative or other farm organization that can act on their behalf. A co-op or similar organization could deliver product for all farmers, handle paperwork for its members, and allow you to work with one person instead of a number of individual farmers. Working with a cooperative would simplify the procurement process for both you and the individual farmers. However, there are many examples where schools purchase directly from multiple farmers or vendors and are able to develop an efficient procurement process.

Farmers ' costs are upfront – they don 't receive payment for their crops until after the ground has been prepared, the crop has been planted, and the harvest has been brought to market. Because of this, prompt payment is appreciated. Most farmers will prefer payment within 15 -30 days, but some will accept payment up to 60 days after the sale.

Most experienced growers are familiar with and adhere to food safety regulations. Farmers who are selling their products through existing marketing and distribution outlets are already required to follow all pertinent rules and regulations. Take the time to examine their product and the truck in which it is delivered. If you have any concerns, make them known. You might also consider asking about an on-farm visit, as well.

Look for those growers who show a real willingness to work with you – and be willing to work with them. The school food procurement system does not naturally lend itself to buying direct from farmers. In developing a procurement system that works for farmers and schools, both sides will have issues and concerns that deserve consideration and discussion.

Get Support from Others. The school food service director need not try to implement a farm-to-school program alone. Farm-to-school programs can be an opportunity for the various stakeholders in the school system (food service, teachers, school staff, administrators, parents, students etc.) to work together toward the common goals of improving school meals. A good strategy is to have an organizing meeting to present your ideas and to allow others to express theirs.

Who to involve from the school. These folks might be interested in taking part in an organizing meeting: School Food Service Staff, Nutritionist, Principals, Teachers, School Nurse, Students, Parents and PTA Members, School Board Members.

Others to involve in the community:

County health and nutrition staff; county extension agents; county conservation district officers; county agriculture commissioner; staff from local congressional and state representative offices, local government officials, chamber of commerce, farm and sustainable agriculture organizations, environmental groups, anti-hunger and food security organizations

Who to involve in the state:

Oklahoma Department of Agriculture, Food and Forestry; Oklahoma State Departments of Education and Health; Oklahoma Food Policy Council; Kerr Center; Oklahoma Food Cooperative

* This handout was adapted by Kerr Center staff from the publication, “Sourcing Food from Local Farmers,” Vermont FEED (Food Education Every Day!). To learn about Vermont FEED’s innovative farm-to-school approaches and to view or download their helpful resources, go to their website, www.vtfeed.org.

FOOD CONNECTION ACTIVITY

Using Section 1 of the *Food Connection*, find five producers/farmers who are potential vendors for your school.

- 1.
- 2.
- 3.
- 4.
- 5.

Using Section 2 of the *Food Connection*, list five crops you would be interested in purchasing from a local producer/farmer.

- 1.
- 2.
- 3.
- 4.
- 5.

Refer back to Section 1 of the *Food Connection*. Are any of the crops you just listed grown by producers/farmers in your county or surrounding counties?

If so, which crops are you able to purchase from local producers/farmers?

Using Section 4 of the *Food Connection*, are there any Oklahoma farmers' markets in your area?

**Sample Letter to Local Producer/Farmer
Use Official Letterhead**

Date

Mr. and Mrs. Old MacDonald
RR 2, Box 31
Green Valley, Oklahoma 73048

Dear Mr. and Mrs. MacDonald:

Children who learn to eat healthy, live longer. By establishing healthy habits early in life, children can dramatically reduce their health risks and increase their chances for longer, more productive lives. We all want the best for our children. Here is how you can help.

Our school district is starting a Farm-to-School program. We would like to purchase fresh fruits and vegetables from local farmers in our area for our school meals. Purchasing from local producers will allow us to provide fresh, ripe produce of the highest quality and nutritive value to our students.

Please join us and other local producers/farmers on Monday, July 10, at 10 a.m. in the school cafeteria for a meeting to learn more about our Farm-to-School project. We will discuss what crops you have available, quantities of food needed by our schools, and school purchasing procedures.

Please call me at (580) 111-2222 if you have any questions.

Sincerely,

Betty Beauty
Child Nutrition Director

Weights and Processed Yields of Fruit and Vegetables in Retail Containers



Cooperative Extension Service

The University of Georgia College of Agricultural and Environmental Sciences

Retail or direct marketing at farmer's markets, roadside markets, stands and pick-your-own farms is an important and growing method of marketing fresh fruits and vegetables in Georgia. However, many of the containers used in the wholesale trade are not practical for direct marketing to consumers who desire fruits and vegetables in small quantities. The retail marketer has the option of selling his product in small volume containers or by count when scales are unavailable.

Containers available for retail marketing come in a wide range of sizes and materials. Some of the more common retail containers are presented in Table 1.

Table 1. Common Retail Containers

COMMON NAME	MATERIAL	COMMON SIZE(S)
Bags	Paper and polyethylene, often with handles	¼ peck to ½ bushel
	Kraft paper bags	Grocery bag - 2/3 bushel No. 20 bag - 8 quarts No. 10 bag - 7 quarts No. 8 bag - 4 quarts No. 2 bag - 1 quart
Baskets	Wood	¼, ½ and 1 peck; ½ and 1 bushel
Boxes, Cartons and Hampers	Corrugated paper, often waded, or wood	from ½ peck to 1 bushel
Fruit and Vegetable Baskets	Corrugated paper with handles	2 to 8 quarts
Fruit Tills or Cups	Pulp, cardboard, plastic, corrugated paper or wood	½ pint to 4 quarts
Trays	Corrugated paper	6 to 8 quarts (10 to 15 pounds)

Under specific fruit and vegetable crops, retail containers are compared with the more common containers (bushels, lugs, etc.) that are used in the wholesale trade (tables 2 and 3). In addition, weights and approximate yields for canning and freezing of fruits and vegetables in some of the common retail containers are presented for use in retail marketing. Because processed yields can vary so much based on size of produce and processing method, consider the indicated yields to be approximate values.

Table 2. Weights and Approximate Processed Yields for Fruits

PRODUCT	RETAIL VOLUME	NET WEIGHT (LBS)	PROCESSED YIELD
Apples	bushel (bu.)	42 to 48	1 bushel = 15 to 18 qt. canned applesauce = 30 to 36 qt. frozen applesauce = 10 to 12 qt. juice
	½ bushel bag	24	1 peck (32 med. apples) = 4 qt. canned 1¼ to 1½ lb. fresh = 1 pt. frozen
	peck	10 to 14	2½ to 3 lb. fresh = 1 qt. canned 1 cup pared, sliced = ¼ lb.
Blackberries	6-qt. tray	10 to 12	1½ to 3 lb. = 1 qt. canned
	gallon	5 to 6	
	quart	1¼ to 1½	

PRODUCT	RETAIL VOLUME	NET WEIGHT (LBS)	PROCESSED YIELD
Blueberries	6-qt. tray	9 to 12	2¼ to 3 lb. = 1 qt. canned
	gallon	6 to 8	1 pt fresh = 1 pt. frozen
	quart	1½ to 2	1 cup = ⅓ lb.
	pint	¾ to 1	1 cup = ⅓ lb.
Cherries	lug	15 to 16	2 to 2½ lb. = 1 qt. canned, unpitted
	quart	1½ to 1¾	1 pt. = 1 pt. frozen, unpitted
	pint	1¼ to 1½	1 cup = ⅓ lb.
Grapes (with stems)	bushel	44 to 50	1 bu. = 16 qt. of juice
	lug	24 to 28	1 cup (whole, stemmed) = ⅓ lb.
	2-qt. basket	2½ to 3	
Peaches	bushel	48 to 52	1 bu. = 18 to 24 qt. canned
	½ bushel bag	24	2 to 2½ lb. = 1 qt. canned
	lug	19 to 22	1 to 1½ lb. = 1 pt. frozen
	peck	12 to 14	1 cup = ⅔ lb.
Pears	bushel	48 to 50	1 bu. = 20 to 25 qt. canned
	lug	21 to 24	2 to 2½ lb. = 1 qt. canned
	peck	12 to 14	1 to 1½ lb. = 1 pt. frozen 1 cup pared, sliced = ⅔ lb.
Plums	bushel	50 to 56	1 bu. = 24 to 30 qt. canned
	peck	13 to 15	2 to 2½ lb. = 1 qt. canned 1 cup halves = ⅓ lb.
Raspberries	6-qt. tray	8 to 10	1 cup = ⅓ lb.
	3-qt. tray	4	
	quart	1¼ to 1½	
	pint	¾	
Strawberries	quart	1¼ to 1½	1 lb. = 1 pt. frozen
	4-qt. basket	6	
	6-qt. basket	10 to 12	
	8-qt. basket	12 to 15	
	8-qt. flat	12	
	24-qt. crate	36	

Table 3. Weights and Approximate Processed Yields for Vegetables

PRODUCT	RETAIL VOLUME	NET WEIGHT* (LBS)	PROCESSED YIELD	COMMENTS
Asparagus	bushel (bu.)	24	1 to 1½ lb. = 1 pt. frozen	often sold in bunches weighing 1½ to 2 lb. each
	pyramid crate	32	3 to 4 lb. = 1 qt. canned	
Beans, Lima	bushel	30	1 bu. = 12 to 16 pt. frozen	
	peck	8 to 9	3 to 5 lb. = 1 qt. canned	
Beans, Snap	bushel	28 to 30	1 bu. = 30 to 45 pt. frozen	
	peck	8	1½ to 2½ lb. = 1 qt. canned 1 bu. = about 15-16 qt. canned	
Beets	bushel, topped	52	1 bu. = 35 to 42 pt. frozen 2 to 3½ lb. = 1 qt. canned	often sold in 2 lb. bunches with leaves
Broccoli	bushel	23 to 25	1 bu. = 10 to 12 qt. canned 1 lb. = 1 pt. frozen	usually sold by the head or bunch weighing 1 to 1½ lb.
Brussels Sprouts	carton, loose pack	25	1 qt. = 1½ pt. frozen	
	quart	1½		
Cabbage	flat crate	53 to 60	3 lb. = 1 qt. canned sauerkraut	often sold by the head, varying in size with variety and tightness of head, usually 2 to 6 lbs.
	carton	53	1 lb. = 2 cups cooked 1 lb. = 4 cups shredded	

PRODUCT	RETAIL VOLUME	NET WEIGHT* (LBS)	PROCESSED YIELD	COMMENTS
Carrots	bushel, topped	50	1 bu. = 32 to 40 pt. frozen	often sold in 1 lb. bunch with tops
	carton packed 2 doz. bunches of 1 lb. ea.	23 to 27	2 to 3 lbs. = 1 qt. canned	
Cauliflower	carton of 12 to 16 trimmed	18 to 24	2 med. heads = 3 pt. frozen, or 1½ qt. canned	usually sold as 1 to 1½ lb. heads
Collards	Sold by doz. bunches: 3 plants per bunch from N. Ga., 5-7 plants S. Ga. from direct-seeded crop		¾-1 lb. = 1 pt.	markets desire bunches to weigh 4 lbs.
Corn, Sweet	bushel	35	60 ears = 14 to 17 pt. frozen	usually sold by doz. which weigh 6 to 8 lb. in husk
	wirebound crates	42 to 50	1 doz. ears = 1 to 1½ qt. canned	
Cucumbers	bushel peck	48 to 50 12 to 13	1 bu. = 24 qt. of dill pickles	sometimes sold by count
Eggplants	bushel	33 to 35		sometimes sold by count
Greens	bushel	18 to 20	1 to 1½ lb. = 1 pt. frozen	mustard, spinach, & turnip often sold in 1 to 1½ lb. bunches or bag
Kale	bushel	18	1 bu. = 6 to 9 qt. canned 12 to 18 pt. frozen	also sold in 1 to 1½ lb. bunches
Muskmelons	bushel	48		usually sold by count; vary widely in size by variety, 3 to 6 lb. each
Okra	tall bushel hamper	26 to 30	1 bu. = 17 qt. canned	
	12 qt. basket	15 to 18	34 to 40 pt. frozen	
Onions	dry, sack	50		
	bunch, green - 48 bunches	15 to 18		
Peas, English green (unshelled)	bushel	28 to 30	1 bu. = 12 to 15 pt. frozen	
	peck	7 to 8	3 to 6 lb. = 1 qt. canned	
Peas, Southern	bushel hamper	25	3½ - 4 = 1 qt.	
Peas, Edible Pod	peck quart	8 to 10 1 to 1½		
Peppers, Green Hot	bushel	25 to 30 ² / ₃	² / ₃ lb. = pt. frozen	Green (often sold by count) large peppers, 80-85 per bu; small peppers, 110 per bu.
	cartons	16 to 25		
Potatoes, Irish (mature)	sack	100	1 bu. = 20 qt. canned	
	bushel	60		
	peck	15		
Potatoes (new)	No. 10 bag	10		
Pumpkins	pie pumpkin ea.	5 to 15	3 to 4 lb. = 1 qt. canned	sold by count
	Jack o'lantern ea.	15 to 40		
Radishes	carton of 30 6 oz. film bags	12		also sold in bunches of ½ to ¾ lb.
Rhubarb	bunch	2 to 2 ½	1 lb. cooked = ¾ cup	
Rutabaga	bushel basket	56	1 lb. = 2 ² / ₃ cups diced	usually sold by count
	peck	15		
Squash, Summer	bushel	40 to 44	1 bu. = 32 to 40 pt. frozen	zucchini, crookneck, Patty Pan, etc.
	8 qt. basket	10	2 to 4 lb. = 1 qt. canned	

PRODUCT	RETAIL VOLUME	NET WEIGHT* (LBS)	PROCESSED YIELD	COMMENTS
Squash, Winter	small ea.	1 to 4	3 lb. = 2 pt. frozen 2½ to 3 lb. = 1 qt. canned	usually sold by count and may be graded by size such as Acorn, Butternut, Buttercup
	intermediate ea.	6 to 12		such as Delicious, Golden Hubbard, Banana
	large ea.	15 to 40		such as Blue Hubbard, Jumbo Banana
Sweet Potatoes	bushel (cured)	50	2/3 lb. = 1 pt. frozen	
	peck	12 to 13	2 to 3 lb. = 1 qt. canned	
Tomatoes	bushel	53	2½ to 3½ lb. = 1 qt. canned	
	paperboard box	25	1 bu. = 15 to 20 qt. canned	
	8 qt. or peck basket	12 to 15		
Turnips	(without tops) mesh bag or bushel	50 to 56	1 lb. = 2 ² / ₃ cups diced	wash - tie 6-8 turnips per bunch - roots to be 2-3" in diameter
	peck	12 to 15		
	bunched with tops - sold by doz. in paperboard box	18 doz.		
Watermelons	paperboard box	4 melons	usually sold by count	

*Net weight per container may vary slightly due to variation in product size. Net weight should not be less than the least stated weight listed.

Volumes and Conversions

- **Bushel** = 2,150 cubic inches = 8 gal. (dry) = 32 qt. (dry) = 64 pt. (dry) = 4 pecks
- **Peck** = ¼ bushel = 8 qt. (dry) = 538 cubic inches
- **Lug** = shallow containers, usually wood, that vary in size
- **Gallon** = 4 qt. = 231 cubic inches
- **Kilo** (or kilogram) = 2.205 lb.
- **Liter** = 1.057 qt. (liquid)

Acknowledgments and Selected References

The authors wish to acknowledge the following sources and references, certain tables from which were adapted for use in this publication.

Conversion Factors and Weights and Measures for Agricultural Commodities and Their Products. Production and Marketing Administration, USDA, 96p.

Sabota, C.M. and J.W. Courter. *Net Weights and Processed Yields of Fruits and Vegetables in Common Retail Units.* Cooperative Extension Service, University of Illinois at Urbana-Champaign.

Magoon, C.E. *Container Net Weights.* United Fresh Fruit and Vegetable Association, Alexandria VA. 1976.

Prepared by former Extension horticulturists S.C. Myers and Paul Corditz. Released by Darbie Granberry and Terry Kelley, Extension horticulturists

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Gale A. Buchanan, Dean and Director

Section 4

Connecting with Students

- Introduction
- Meet the Farmer
- Speakers Bureau
- Taste Testing New Foods
- Cooking with Kids
- Pumpkins, Squash and other Cucurbits lesson sampling
- Menu of Rationale for School Gardens

CONNECTING WITH STUDENTS

INTRODUCTION

The most successful farm-to-school programs include a strong educational component, often using hands-on personal experiences to give students a sense of what real food is, where it comes from and how it is produced. Activities such as tasting parties, cooking classes, farmer visits, field trips to farms, and school gardening all engage kids in situations which promote informed and healthy choices.

Most kids raised in urban and suburban communities have little or no contact with farms and food production. Even in rural areas, few children these days have first-hand exposure to farm life, or the path food takes from the field to the table. This is understandable given that just two percent of Oklahoma's population are farmers.

As schools begin using more locally produced fruits, vegetables and other foods in their cafeterias, simultaneous efforts are needed to ensure that students, cafeteria staff and faculty know these items are being served. Even though the quality and taste of local products may be superior, creatively promoting their availability and benefits will improve awareness and participation.

Some farm-to-school programs conduct educational activities before ever introducing new foods in the lunch line. These efforts work under the premise that meal participation and consumption of new foods is highest when students have first learned about and tasted them in the classroom or in some other setting besides the lunch line.

An excellent model for this "try before you buy" approach comes from the Vermont FEED (Food Education Every Day) Program. Their instructional fact sheet on taste testing is included in this section of the Resource Guide.

Recognizing that many young families lack adequate cooking skills, Vermont FEED and other successful programs involve children in preparing simple nutritious classroom snacks and dishes while also integrating food, farm and nutrition education with academic standards. Many of these projects feature seasonal locally grown foods, and may be eligible uses for child nutrition activity funds or grant monies from school district education foundations.

A resource summary of the Cooking with Kids Program in New Mexico is included in this section. Since publication of the summary, Cooking with Kids has created a website with information about their program, as well as free downloads of various bi-lingual tasting lessons for some popular fruits and veggies. These can be viewed at www.cookingwithkids.net.

One way schools can reach out to farmers in their community is by asking them to come visit with classes, possibly in conjunction with tasting or cooking activities. When visits by farmers are connected with the serving of their products in the classroom or cafeteria, kids get a chance to put a face on their food.

Farmers showing pictures or telling how crops or animals are raised can also be very interesting to kids and can add a valuable dimension to teachers' classroom lessons. School administrators and food service directors likewise benefit from the positive attention this can bring to their programs.

Another great opportunity for educating school children about food and farming is when farmers host tours of their farms or ranches for school classes. Food service managers, teachers and school administrators interested in visiting nearby farms or having farmers come to their schools should check out the Kerr Center's Farm-to-School Speakers Bureau. A listing of farmers and ranchers who've signed-up is included in this section.

Whether or not schools are able to visit farms or have farmers come speak, they may want to correspond with a farmer through Oklahoma Ag in the Classroom's "Farm Pen Pal" program. Here, teachers sign-up their classes to exchange letters with a participating Oklahoma farmer, while learning about food, farming, and proper letter writing skills. Teachers can learn more and sign-up for a Pen Pal packet at www.agclassroom.org/ok.

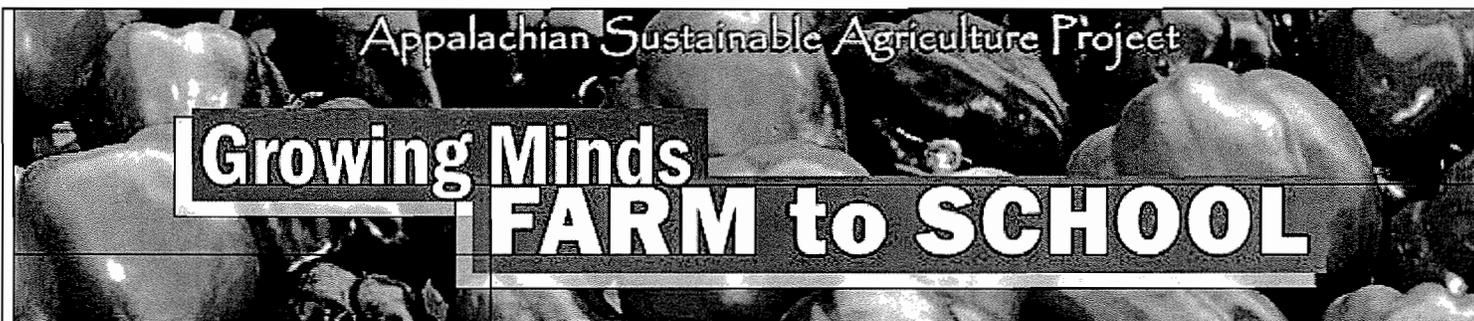
Food service managers may also want to make sure the teachers in their schools know about the many valuable lessons and resources available through Oklahoma Ag in the Classroom. A few sample pages from a recent series of lessons about nutritious fruits and vegetables grown in our state are included in this section. All lessons are available for free on their website listed above.

An increasing number of schools across the nation and in Oklahoma are finding that school gardens offer a place where students, teachers and parents can slow down for a few minutes and enjoy the simple pleasures of life.

Like farms, gardens serve as outdoor classrooms with numerous opportunities for applying skills in math, science, reading, social studies and even art. Besides learning about plants and the fun nourishment they can provide, gardens are a good outlet for physical activity. Gardening can also give children a sense of fulfillment, responsibility and patience that can only come from nurturing life and relying on nature's own pace.

There are many good resources available for those interested in school gardening. In fact, the Oklahoma Department of Environmental Quality and the Kerr Center have recently published a *Planning Guide for Edible School Gardens*. An excerpt from this publication is included in this section. Check www.kerrcenter.com for availability of the full publication.

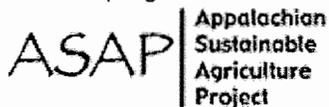
This portion of the resource guide thus provides examples of how food service managers can help children learn about healthy food choices through hands-on experiences. These activities give students a sense of connection with their food and its essential value to their health and the health of their community; a connection missing in today's fast-paced culture. All the activities addressed in this section are suitable for schools whether or not they're using locally raised products in meal programs. But if schools are already making local purchases, or are hoping to, these type efforts can bring together significant student and community support for doing so.



- Home
- Local Food in Schools
- Farm Field Trips
- Nutrition Education
- School Gardens
-
- Educators
- Lesson Plans
- Children's Literature
- Kids' Writing
-
- Resources
- Articles & Research
- Links
- Farmer's Tool Kit
- Child Nutrition Director Tool Kit
- Events Calendar
-
- Get Involved
- Farm to School Committee



Growing Minds is a program of



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Meet the Farmer

MARCH 9th, 2006

Brush Creek Elementary -Madison County, NC

"That's the farmer? I thought they would be wearing overalls!" exclaimed a 4 th grade student at Brush Creek Elementary. Thursday students had the chance to meet two of the real farmers in their community, and neither were wearing overalls.

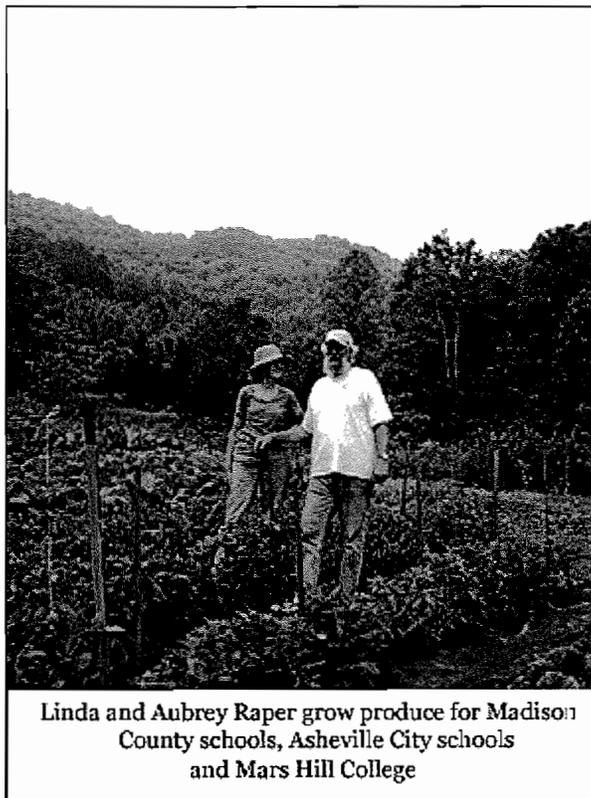
"Do you get to drive a tractor?" Second grader Kasey asked farmer Linda Raper who, along with her husband Aubrey, grows food for Madison County schools. Students had the opportunity to put a face to their food at this "Meet the Farmer" event organized by the Appalachian Sustainable Agriculture Project's (ASAP) Growing Minds program.

Students at Brush Creek Elementary ate lunch with two farmers from their community in addition to participating in surveys and sampling a fresh healthy dish prepared by a local chef.

"Cabbage, carrots and broccoli, those are all things you could grow in your back yard." Explained a teacher as her students watch chef Charlie Loomis, from Greenlife Grocery, prepare a stir-fry. Most students shook their head with a wary look when asked if they had tried stir-fry before. But with a live cooking demonstration in their cafeteria, students tried this new dish. A 5 th grade student proclaimed "This is delicious!" as he came back for his 6 th sample of the day. Students took home recipes and left with a different perspective on cabbage. "Even I liked it," said a 2 nd grade teacher "and I don't like vegetables." Introducing kids to fresh locally grown produce and healthy ways to prepare it are two goals of ASAP's Growing Minds – Farm to School program.

Local food is being served in Madison county schools, expanding markets for local farmers, keeping money in the community and providing students with the freshest food possible. "The idea behind events like Meet the Farmer is to raise awareness and support for Farm to School" explains Molly Nicholie, an organizer of Thursday's event, "and to help students connect with farmers in their community."

Students know Pam Zimmerman as one of the women who works in the school office, and many were surprised to find out she is also a farmer. "This is your farm?" students asked of the pictures including mountain views and bright clumps of berries. Pam invited students to



Linda and Aubrey Raper grow produce for Madison County schools, Asheville City schools and Mars Hill College

come to her U-pick berry farm this summer. "I like the black raspberries best" she admitted, but we also have blackberries, red and yellow raspberries."

Leaving their not so typical lunch period, student waved packages of seeds and local food bumper stickers. "The students here have the potential to be our next generation of farmers," says Nicholie, "and with community support of programs like these farming will still be viable option in 20 years."

A non-profit based in west Asheville, ASAP strives to support local farmers by increasing awareness and demand for local products. Highlighting locally grown food helps to sustain farms in our communities and identifies the freshest food possible for consumers. ASAP's Growing Minds program is a component of their local food campaign, supporting healthy farms, healthy food and healthy kids.



Send comments or suggestions to Emily@growing-minds.org
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Growing Minds is a program of the [Appalachian Sustainable Agriculture Project \(ASAP\)](#).
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Courtesy Tulsa World

Oklahoma Farm-to-School: Growing Healthy Kids and a Healthy Rural Economy

Speakers Bureau

Learn about Oklahoma agriculture from Oklahoma farmers!

These farmers may be available to speak to school classes and/or to host tours of their farms.

FARMERS:
Add your name to this list »

Visit Our Community Food pages

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QUICKLINKS:

[Farm-to-School Main Page](#)

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[How Farm-to-School Programs Help Kids Eat Healthy](#)

[2005 Participating Schools/Contact Info](#)

[Farmer Speaker's Form](#)

[Farm-to-School Program Expanded in 2005 \(press release\)](#)

[The Oklahoma Food Connection: A Directory of Agricultural Producers, Crops and Institutional Buyers](#)

[The Oklahoma Farm-to-School Report](#)

MORE INFORMATION

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Programs:

Oklahoma Grants

Sustainable Development Policy

Stewardship

Overstated Farm

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Affiliated

Oklahoma Council

Rural Task Force

SARE Development

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- Parents/Teachers
- Farmers
- Food Service Managers

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Educational Pumpkin Patch, Hay Maze,
Corn Maze, Cow-Painted Bathtub Rides
in October, Dairy Farm Tours.

*Farm-to-school information brought to you in partnership with USDA
Risk Management Agency, Community Outreach & Assistance
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2004-33800-15141

BACK TO TOP

Food Education Every Day!



Vermont **FEED**



Taste Testing New Foods in the Classroom and Cafeteria

Classroom and cafeteria taste tests were started in the VT FEED program when staff realized that students wouldn't necessarily eat the fresh foods and whole grains being introduced in the school food program. Students needed some experience with the food first, because they can be hesitant to try new foods. In the school lunch line, there is barely enough time to get food and eat, much less be introduced to a new food item.

Even the most creative school food providers have difficulty changing kids' tastes without education. Vermont FEED has found that by connecting the three C's (the Classroom, Cafeteria, and Community) taste tests of new food can be successfully carried out in either the classroom, often during snack time, or in the cafeteria during lunch. The most important thing is to make it a hands-on experience for students; "If they make it they will eat it."

You will need key players involved from the beginning: administration, food service, community/parent volunteers, school nurse, and a least one classroom teacher. Start small and set up a system that can be easily coordinated, hopefully by a volunteer. Whatever food you test, it needs to be at a price and in a form that will work within a school food program. Otherwise you may be exposing students to new foods, but they won't connect it to the school food they see every day.

Taste Testing in the **CLASSROOM**

Some teachers have successfully introduced new foods in the classroom in a short, informal, and regular weekly session. Working with the food service is crucial so that food tested in the classroom will be featured on the school menus. Parent and community volunteers can help organize the taste testing for more than one classroom or provide some of the foods

to be tested. The key is to keep it simple: sliced cucumbers, different types of lettuce, or sliced pear can be part of a dynamic taste testing lesson. Accompanying the tasting with some ‘fun food facts’ helps students become more familiar and accepting of the new food. Also, if they can be involved in preparing the food to be tested, they will be more likely to eat it.

Excerpt from Janet Lynch, teacher, Milton Elementary School, research on taste testing in her classroom:

Another component of the nutrition education unit was taste testing in the classroom. A study by Baxter and Thompson (2002) reported that children would not eat fruits and vegetables offered in school lunches if they had not tasted them previously. After observing plate waste in the cafeteria, I targeted eight fruits and vegetables that had been on the menu that week. Using observation, I determined how much of a portion the children had eaten.

We then taste-tested four of these fruits and vegetables in the classroom: fresh pears, canned pears, fresh carrot sticks and different types of lettuce. After the nutrition unit, I again observed plate waste in the school cafeteria to determine how much of a portion my students had eaten. Three of the four foods tasted in the classroom showed an increase in the portion eaten by my students. The third item, salad greens, decreased very slightly. The fresh carrot sticks, which increased from 14%

of a portion to 45% of a portion, showed the most significant increase. The fresh pears also showed a significant increase, from 11% of a portion to 25% (see Table 1). On average, the consumption of these targeted fruits and vegetables increased by 59.1%.

I then examined the portions consumed of the four fruits and vegetables not tasted in the classroom: canned corn, canned pineapple, cooked broccoli and canned peaches. The average portions eaten by my students stayed the same or decreased in size (see Table 2).

Although sample size was small, it appeared obvious that taste testing had increased the consumption of the targeted fruits and vegetables. Children’s comments also supported the findings that taste testing in the classroom encouraged them to try new foods. They reported being more willing to try new foods at home and in restaurants. The children perceived taste testing in the classroom

as a safe and fun thing to do. Even the children labeled by their parents as fussy eaters were willing to try new foods in the classroom.

TABLE 1

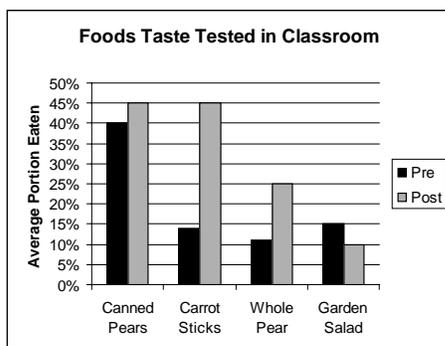
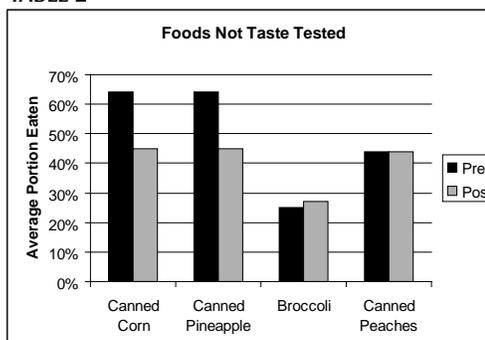


TABLE 2



Taste Testing in the **CAFETERIA**

Successful cafeteria taste tests involve sampling new foods in the cafeteria during lunch, but at a separate tasting table. With some teamwork, and advertising of your efforts, this can build school-wide excitement. VT FEED encourages you, and can help you to find local farmers willing to be partners for testing their products.

A committee of people can share the responsibilities and make taste testing a regular event. As students become familiar with the taste tests, they will become more accustomed to change and be more open to trying new foods.

Keys to successful taste tests in the cafeteria:

- Start with regular taste tests (monthly is usually not too overwhelming to organize) and focus on simple preparation of fresh fruits and vegetables
- Find parents or community volunteers who can coordinate the classrooms with cafeteria activities. The food service staff will not have the time to do this, although they can participate in some parts. Remember to involve them from the beginning in deciding what food to test, where to get it, and how to prepare and serve it.
- Involve students in any way you can to foster their relationship with food service staff.

- Get teachers to involve some students in preparing the food to be tested. It can be as simple as cutting up cabbage or mixing a vegetable and rice casserole. This gives students a chance to become acquainted with the food and the cafeteria staff, and to spread the word about the new food.
- Have someone announce the taste testing on the day it occurs.
- Offer the taste tests during regular lunch on a table that looks appealing (a tablecloth shows that something special is happening!).
- The students who prepared the food often can help serve the samples, at least for some of the lunches.
- It is important to survey students who try the new foods so that students feel involved in what could be served in school. (SEE SAMPLE OF A TASTE TEST SURVEY).
- When the taste testing is finished, have someone announce the results of the survey to the whole school, along with plans for featuring the food in the regular menu.



Food Education Every Day!



Vermont FEED

Vermont FEED is a community-based approach to school food system change in a rural state through the collaboration of three Vermont nonprofits:

- Food Works
- Northeast Organic Farming Association of Vermont
- Shelburne Farms

The mission of VT FEED is to raise school and community awareness about healthy food, Vermont farms and farmers, and good nutrition. We act as a catalyst to rebuild healthy local food systems by cultivating links between classrooms, cafeterias, local farms, and communities.

To find out more about VT FEED,
and how your school can become involved, contact:
Abbie Nelson, Coordinator, 802.434.4122 or info@nofavt.org

Taste Test Survey

DIRECTIONS: Use this form to collect information about your recipe!

1. Visit either each class in the school or the cafeteria during lunch times.
2. Highlight the whole grain, local fruit, or vegetable that is in your product.
(For example: if you are making zucchini bread, bring a zucchini)
3. Column One: Record the number of participants who you are surveying (give them time to taste the new food).
4. Column Two: Record the number of participants who tried the food.
5. Column Three and Four: Record the number of participants who liked the food and then will eat it again (at lunch or breakfast).

Product _____

Number of Participants (at testing table)	"I tried it"	"I liked it"	"I'll eat it again"

Tips & Procedures for Successful Taste Testing in the Cafeteria

BE SURE TO HAVE STUDENTS DO THE SURVEYING FOR THE TASTE TESTING. OTHER STUDENTS RESPOND WELL WHEN SERVED BY PEERS WHO MADE THE PRODUCT!

Preparation: Things to think about and do before you make your product!

- Well before you plan to make your product, talk to Food Service Staff about their needs and possible resources they have to share.
- Identify community and parent volunteers who can work with you and/or donate product.
- Decide with food service staff what fresh and whole grain foods or recipes might be acceptable to students (don't start with seaweed salad!). Foods must be affordable and simple enough to be repeated if the students like it! (Don't forget to use local produce when possible and invite your local farmer or processor to join your taste testing efforts)
- Estimate how many students will take the taste test so you can be sure to prepare enough for all. FOR EXAMPLE: 5 classes, with 25 kids each= 125 tastes (remember small servings)
- When thinking about a food item to make, try to feature a healthy, local product as the main ingredient. FOR EXAMPLE: Carrot muffins with carrots from a local farm
- If at all possible, work with the food service to have a small group of students prepare the food with them. Food education works best through hands-on experiences.

Surveying at Lunch: Things to think about for doing taste tests during lunch!

- You need 1-2 students to serve at each lunch period.
- You need 1-2 students to survey participants at each lunch period.
- Have your students use the survey on the back of this sheet. (You may want to go over the survey procedure with them first.)
- Collect and tally the data from the survey. (This can be a great student math project with graphing.)
- Report the data to school newsletter or local media and report whether the items will be on a menu in the future.

Resource Summary and Review, May 2004

Cooking with Kids

Cooking with Kids. 2002.

Goals: To combine and reinforce food, cooking and culture via an integrative hands-on program for youth.

Ages: 5 to 12 (grades K-6).

Development: Created by Lynn Walters and Jane Stacey. Funded by the City of Santa Fe, The McCune Charitable Foundation, The Buckaroo Ball Committee, The Frost Foundation, The Ethel Jane Westfeldt-Bunting Foundation and the USDA Food and Nutrition Service Food Stamp Nutrition Education Program through the NM Human Services Dept through NMSU Cooperative Extension Service.

Theory/Rationale: Youth are presented with new food experiences through food tastings. These experiences are built onto during cooking classes. Experiences are then reinforced through cafeteria meals.

Content: The program includes three parts, tastings, cooking classes, and cafeteria meals. Tastings last 1 hr and focus on farming and food exploration. Each of the 4 cooking classes last 1 ¾ hours and include regional background lessons and cultural integration while focusing on hands-on learning. Activities and experiences are reinforced via cafeteria meals, in which Cooking with Kids recipes are provided as school lunch meal options. Program materials include a teachers guide, recipe book, and video outline.

For More Information: Lynn Walters and Jane Stacey. 3508 Camino Jalisco, Santa Fe, New Mexico 87507.

Overview. Cooking with Kids is an integrative food and cooking program which promotes cultural and worldly awareness, community involvement and partnership, and hands-on, enjoyable learning experiences. Materials, such as a teachers guide and multi-lingual recipe book, is provided, as well as food educator expertise throughout the program.

The program includes three parts: tastings, cooking classes, and cafeteria meals.

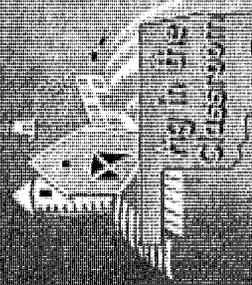
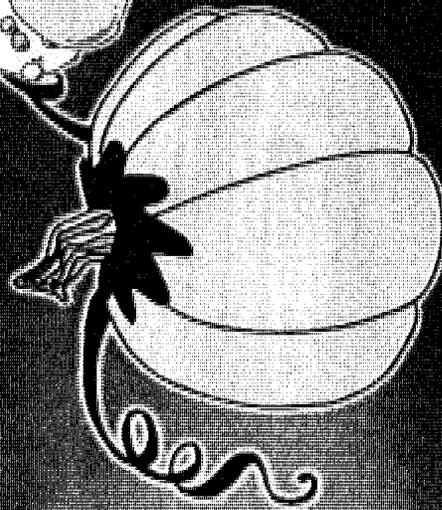
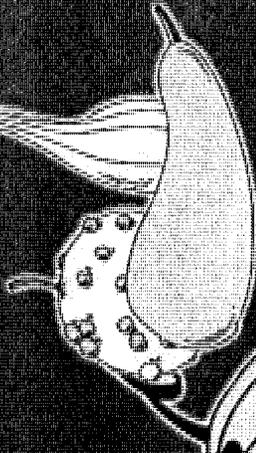
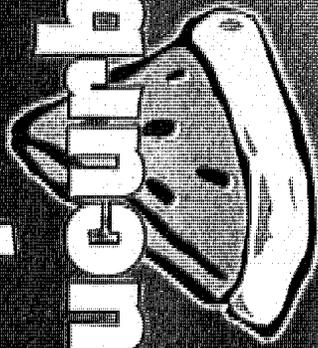
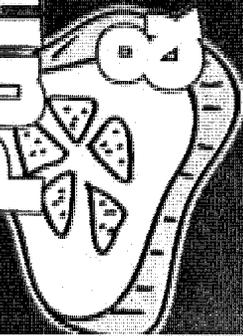
Tastings. Tastings, lasting about an hour, provide youth with a program introduction. Tasted foods may include raisins, apples, citrus, or greens. Lesson plans provides information on geography, nutrition, and culinary uses. Letters from farmers describe how the foods are grown helps to build the bridge between food production and food consumption. Youth are also presented with food journals, which contain information on where the food came from and provides space for the youth to record observations and draw diagrams of the food. In some instances, the youth are able to grow their own plants, such as greens. Prior to implementation, a model tasting with the teachers is hosted by food educators to ensure appropriate curriculum understanding.

Cooking Classes. Food educators host each of the 4 -1 ¾ hour cooking classes, which start with a 10-15 minute introduction, highlighting the region the recipe is from, including it's history, flavors and foods used, and geography. Hands-on learning is promoted, emphasizing cooperative working,

following directions, and math and measuring skills. While eating, music from the highlighted region is played, and the food educator asks the youth for program feedback. Teacher and parent volunteers help to make these classes a success.

Cafeteria Meals. Twice a month following the cooking classes, food educators assist food service workers to prepare Cooking with Kids recipes as part of the school lunch menu. This aspect of the program helps to reinforce what the youth have learned and experienced.

Pumpkins, Squash & Other Cucurbits



<http://www.agclassroom.org/ok>

Cool Cucurbits.....

Squash, melons, pumpkins and cucumbers are all part of the Cucurbitaceae, or gourd, family. They belong to the group of vegetables known as cucurbits.

Cucurbits were among the foods first cultivated by ancient farmers in much of what is now the US. Archaeologists believe ancient people farming along river banks may have cultivated some form of squash, sunflowers and other seed plants even before they learned to cultivate maize. After maize was introduced, farmers continued to grow squash with maize and beans, in the "three sisters" system.

Cucurbits are still a staple in Oklahoma gardens and in Oklahoma agriculture. Watermelons, pumpkins are important Oklahoma food crops. Farmer's markets display a wide variety of squashes and cucumbers throughout the growing season.

Use the activities that follow to maximize the health benefits of eating cucurbits. Some of the Oklahoma Academic Student Skills covered in these activities are:

Grade 1	Math Concept-1.1b; 3.2d; 4.2c; 5.2ab
Writing-4.4	Science Process-1.1,2,3; 2.1; 3.1,3.4; 4.3
Math Process-2.3; 3.3; 4.2; 5.1	Life Science-2.1,2
Math Concept-1.4,5	Social Studies-1.1; 3.2
Science Process-1.1;	Grade 4
2.1; 3.1,2,4	Writing-4.1b; 5.1,1,2d
Life Science-2.1,2	Math Process-2.3; 3.3;
Social Studies-2.3; 3.1	4.2; 5.1
Grade 2	Math Concept-3.2b
Reading-2.1c	Science Process-1.1,2;
Writing-2.5; 3.1g	2.1; 3.1,3,4
Math Process-2.3; 3.3;	Life Science-3.1,2
4.2; 5.1	Social Studies-2.2;
Math Concept-2.1b,3;	4.1,2; 5.2,3
4.2b	Grade 5
Science Process-2.1;	Reading-4.1b; 5.1
3.1,2,4; 4.3	Math Process-2.3;
Life Science-2.1	3.3; 4.2; 5.1
Social Studies-2.3; 3.4;	Math Concept-3.1,1,2
4.2	Science Process-1.1,2;
Grade 3	2.1; 3.1,3,4
Reading-4.1,2b; 6.1	Life Science-2.1,2
Writing-2.5	Social Studies-2.2; 3.1;
Oral Language-2.3	7.5
Math Process-2.3; 3.3;	
4.3; 5.1	

<http://www.agclassroom.org/ok>

The Truth about Cucurbits

Winter squash got its name because it grows in winter.

False: The term "winter squash" dates back to a time when refrigeration and cross country transportation was not as readily available as it is now. "Good keepers" became known as winter vegetables if they would "keep" until December. Winter squash have hard, thick skins and will keep for months if stored in a cool, dark, well-ventilated place.

Squash plants have male and female flowers on the same plant.

True: Species of cucurbits are usually monoecious, with separate pollen-bearing (staminate) male flowers and seed-bearing (pistillate) female flowers on the same plant.

Cucurbits and other vegetables are better for you raw than cooked.

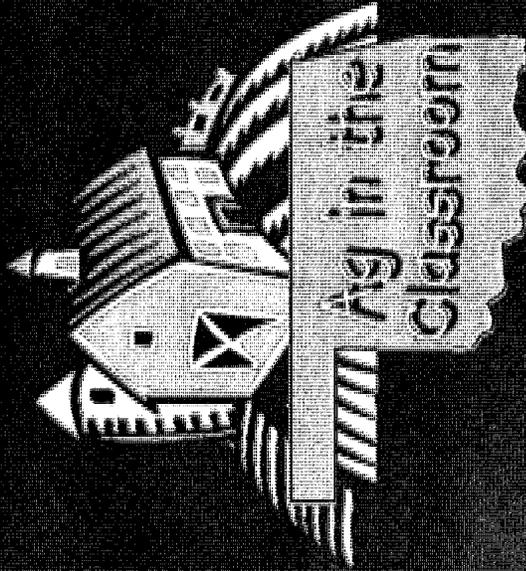
Not necessarily: Although some nutrients are lost when vegetables are cooked, scientists have found that in some foods, more nutrients are released when foods are cooked and mashed. For example, nutritionists recommend eating vegetables raw or only slightly steamed. All steamed vegetables, however, don't matter if you're not going to eat enough to begin with.

Zucchini can grow to the size of a tree trunk.

False: Not quite that big, but they can grow quickly to the size of a baseball bat. Zucchini, Cucurbit and other summer squash taste best when picked between five and six inches long. A zucchini plant can produce as many as 30 zukes per plant.

<http://www.agclassroom.org/>





For more information about
Oklahoma Ag in the Classroom,
contact Jamey Allen at the
Oklahoma Department of
Agriculture, Food and Forestry,
405.522.6768; Mary Ann Kelsey
at the Oklahoma Department of
Education, 405.522.0638; or Pat
Thompson at Oklahoma State
University, 405.744.8885.

<http://www.agclassroom.org/ok>

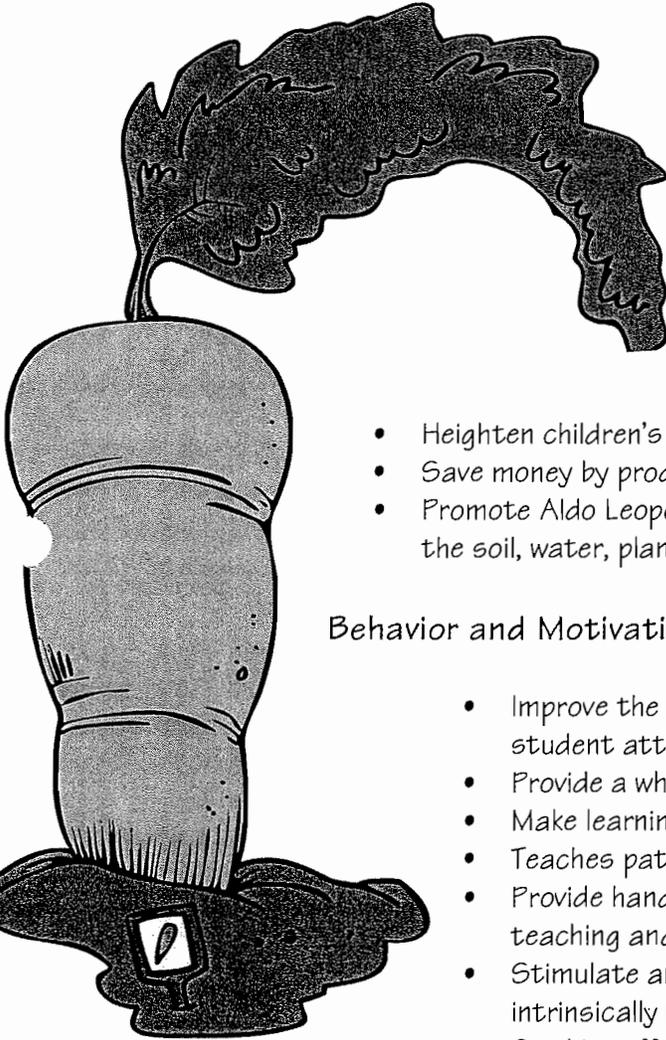
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Support for the purchase of Cooperative Extension work, acts of May 8 and June 30, 1916, in cooperation with the Oklahoma Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This University, in cooperation with the Oklahoma Department of Agriculture, Food and Forestry as well as Agricultural Sciences and Natural Resources and has been prepared and distributed at a cost of 60¢ per copy.

A Menu of Rationale for School Vegetable Gardens

(Some points are duplicative, but provide ideas for different verbiage to use in your proposal to acquire administrative and funding support. These points have been adapted from the resources listed below.)

Ethics, Responsibility and Stewardship

- 
- Develop a strong work ethic and sense of responsibility among students
 - Encourage sharing and community involvement by planting a row for the hungry
 - Encourage community-building by engaging parents and nearby residents
 - Instill a sense of ownership, pride and stewardship among students
 - Heighten children's environmental awareness
 - Save money by producing food for the school lunch program
 - Promote Aldo Leopold's land ethic by extending the community to include the soil, water, plants and animals

Behavior and Motivation

- Improve the behavior and outlook of young people, replacing poor student attitudes with enthusiasm and excitement
- Provide a wholesome activity that keeps all students engaged
- Make learning fun, personal and memorable
- Teaches patience
- Provide hands-on inquiry-based opportunities for more effective teaching and make learning come alive
- Stimulate and capitalize on students' interest in living things, thus intrinsically motivating them to learn
- Combine effective elements of traditional and non-traditional teaching methods, thus appealing to different learning styles and supporting positive interpersonal relations
- Provide powerful hands-on learning experiences for non-traditional learners

Academic and Life Skills

- Foster literacy in science
- Provide life skills for students through food production and preparation knowledge
- Engage students in hands-on learning that provides physical, psychosocial and intellectual challenges

Continued on next page..

- Provide a real-world connection to content in a variety of disciplines
- Make valuable connections between disciplines or subject matter areas such as science, math and social studies linked to the required core curricular standards
- Create opportunities to exercise the multiple intelligences of the learners
- Give children a better sense of what real whole food is too many of us are disconnected from our true food sources

Health



- Offer a purposeful physical activity for students of all abilities
- Institute a source of positive memories about nutritious foods that can affect life-long eating habits
- Provide children an opportunity to sample new and different foods in a friendly setting
- Provide students with fresh air, exercise, sunshine, knowledge, mental therapy, and fresh food rich in vitamins and minerals
- Encourage a healthy diet in students by connecting children to the source of their food and fostering an appreciation for the flavors and benefits of vegetables

Bibliography for Rationale



“The Chicago School Garden Initiative: A Collaborative Model for Developing School Gardens that Work,” by Katherine Johnson and Marti Ross Bjornson (www.kidsgardening.com)

“Sowing the Seeds of Success: How to Start and Sustain A Kids’ Gardening Project in Your Community,” by Marcia Eames-Sheavly and the National Gardening Association (www.garden.org/edu)

“Planning Sustainable School Gardens,” by Rory Klick (www.kidsgardening.com)

Section 5

Food and Health

- Food and Health: Rethinking School Lunch

Food and Health

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RETHINKING SCHOOL LUNCH GUIDE



Food and Health

RETHINKING SCHOOL LUNCH GUIDE

FOOD FOR THOUGHT

When I arrived [at the school], many of the returning eighth-grade students were coming to school without breakfast and getting Funnys® and Diet Pepsi at first break. . . . A lot of the first-year menus that I wrote used the familiar packaged frozen burritos, but we would add a good fresh salad and some fruit, like kiwis . . . it was a worthwhile step in the right direction. I know a lot of these kids eat fast food, but they can learn by our example what a well-rounded, nutritious meal can be . . . which all becomes a part of the education. . . . After a little while, we pulled the packaged burrito and replaced it with a healthier version of our own making. By that time the kids were ready to say, 'This is great!' because by then their tastes were beginning to tune into something different."

— Nancy May, food service supervisor for the Healdsburg (California) Unified School District

WHAT'S INSIDE?

RETHINKING FOOD AND HEALTH: The goal, the challenge, and some key points to remember.

CASE STUDY: Nancy May, food service supervisor for the Healdsburg (California) Unified School District, discusses her experiences implementing a farm-to-school lunch program.

SEASONAL LUNCH MENUS: These model school lunch menus, based on local seasonal availability, show one school's creative approach.

FOOD AND HEALTH RESOURCES: Check the "food odometer" and explore current thinking on nutrition and school lunch programs in this compendium of articles and journals.

RETHINKING FOOD AND HEALTH

The Goal *To help shape healthy eating habits, which are essential for students to achieve their full academic potential and lead healthy and productive lives.*

The Challenge *Improving the nutritional content and appeal of school meals to model the healthy lifestyle choices students learn in the classroom.*

We've all heard the phrase "You are what you eat." What does that mean for our children?

Today, school-age children are facing an escalation of diet-related illnesses, including obesity, anemia, and Type 2 diabetes. These serious health challenges — as well as problems associated with chronic low-grade malnutrition — interfere with the ability of students to learn effectively, achieve high standards in school, and lead healthy and productive lives.

Many families do try to ensure that their children eat healthy meals. Too often, however, the meals served at school do not reflect the healthy choices advocated in the classroom and at home. Surveys from the Centers for Disease Control show that barely 2 percent of school-age children consume the USDA daily serving recommendations for all five major food groups, and over half eat less than one serving of fresh fruit and vegetables a day. Nearly 30 percent of American school-age children eat less than one serving a day of vegetables that are not fried.

In their *Guidelines for School Health Programs to Promote Lifelong Healthy Eating*, the Centers for Disease Control state (italics ours):

An optimal policy on nutrition should publicly commit the school to providing adequate time for a curriculum on nutrition, serving healthy and appealing foods at school, developing food-use guidelines for teachers, supporting healthy school meals, and establishing links with nutrition service providers. The written policy should describe the importance of the nutrition component within the comprehensive school health program.

Good nutrition has a role in promoting childhood growth, health, and learning, and in reducing the risk for chronic diseases of adulthood. It is important to establish a school environment that supports healthy eating choices by young people, and generates support for the policy, by identifying how improvements in student nutrition can satisfy the needs of different constituents of the school community.

Making the school lunch period — and the process of cooking and eating — a true learning experience helps children understand that they have choices about the kinds of food they put into their bodies, reinforces the idea that there is a real connection between their health and the food they eat, and encourages them to learn even more about how what they eat affects their lives every day.

KEY POINTS

Healthy Food = Better Students Hungry or undernourished children make poor students. They may be irritable and have difficulty concentrating, which can interfere with learning, and low energy can limit their physical activity. They are more likely than other children to become sick, to miss school, and to fall behind in class. Chronically undernourished children attain lower scores on standardized achievement tests (especially tests of language ability), are more likely to suffer from learning disabilities and retention problems, and are more prone to drop out of school.

The school meal program can model food choices that build lifelong healthy eating habits while supplying the nutrition and calorie energy children need to stay healthy and energetic. Marilyn Briggs, former director of the Nutrition Services Division and former assistant superintendent of public instruction for the California Department of Education, makes a strong case for healthy eating at school: “Most of us already connect nutrition with health. If we go one step further — to connect health with educational goals — then we have effectively connected nutrition to academic performance. There is so much concern over test scores these days. But if kids aren’t in a position to learn because they’re hungry, or they don’t get enough nutritious food at home, then schools that don’t make up the nutrition/performance connection in the cafeteria end up undermining what they’re trying to do in the classroom.”

Healthy Food = Healthy Children Obesity is increasing among children and adolescents in the United States. Approximately 4.7 million — 11 percent — youth ages 6 to 17 are seriously overweight. Obesity in young persons is related to elevated blood cholesterol levels and high blood pressure, and some very obese youth suffer from immediate health problems (including respiratory disorders, orthopedic conditions, and hyperinsulinemia). Being overweight during childhood and adolescence has also been associated with increased adult mortality.

When school food policies limit sales of foods that compete with school lunch and completely eliminate sales of certain kinds of snack foods and sodas with additives, and high fat and sugar content, they are serving the health of children.

Healthy Food = Healthy Communities School district food policies that follow the farm-to-school approach often specify that food will be obtained, to the greatest extent possible, from local, sustainably run farms. These seasonal links to local agriculture and rural communities improve the quality of food served at school and are important threads that connect the entire learning community to the local landscape. School menus that make a point of reflecting the cultural diversity of the community include vegetarian and dairy-free choices, sending a positive message to students and parents that they are valued.

Supporting healthy eating through written policy is a tremendous opportunity for school districts to directly affect children's health and to restore authority for decisions affecting the health of children to their parents and the community.

Healthy Food Goes a Long Way Behaviors and psychological risk factors associated with dietary choices that are established during youth are difficult to change. Positive food experiences that start early will last a lifetime.

It's not hard to get children to eat healthy food — fresh, seasonal, and well-prepared food tastes delicious. When children grow and prepare the foods they eat and visit farms that serve the school, they are naturally more adventurous about tasting and enjoying new foods. Good habits learned at school have a positive impact on families at home; students are effective at bringing home newly adopted healthy attitudes and behaviors toward food.

Healthy Eating Serves Students, Administrators, Educators, and Parents The benefits of a school district's decision to adopt a healthy food policy can be far-reaching. For parents (and the community at large), it restores authority for decisions affecting the health of their children. For educators and administrators, it offers a way to build longer-lasting changes into the school system, and it allows boards of education and district food services to formalize responsibilities for improving student health.

A healthy food policy can institutionalize innovations that can occur only at the district level, such as improvements to

the nutritional content of school meals, lengthening the lunch period, forming a district nutritional advisory committee, and waste management initiatives that include reduction, recycling, and composting.

Beginning to Explore Your District's Nutrition Policies When you begin to explore your own district's nutrition policies, you will want to form a picture of the current state of affairs. Ask the hard questions, and listen to the answers. Then think: How can we move toward healthier meals that support student learning experiences in the classroom, the garden, and the kitchen classroom?

Here are some questions to begin with:

- **Are the learning experiences in the cafeteria linked to the classroom curriculum, garden experiences, and the kitchen classroom?**
- **Does the quality of meals served at school accurately reflect the district's level of concern for student health as expressed in the district food policy?**
- **Is nutrition services a full partner** with the district in improving the quality of meals served to students, and in its role and responsibilities for improvements in student health?
- **Do meals served to students represent what and how students should eat** to create and maintain high standards of personal health over a lifetime?

- **Has the district ensured that à la carte items, junk food, and sodas** are not competitive with school meals and are unavailable to students during school hours?
- **Is a wide array of healthy, tempting, delicious alternatives available** to students in place of high-fat, high-sugar, and highly processed meals, drinks, and snacks?



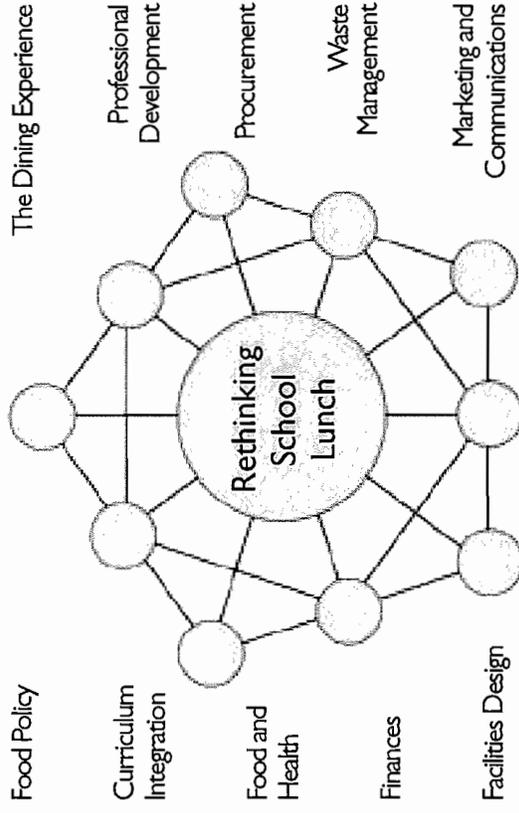
RETHINKING SCHOOL LUNCH Web of Connections

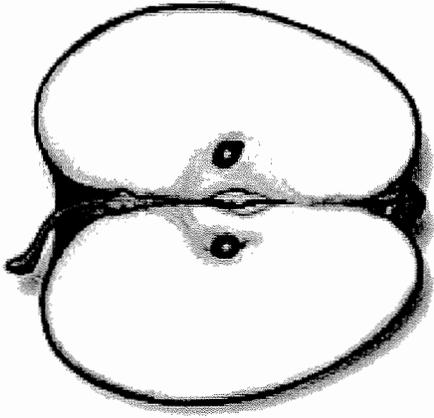
This document is part of a comprehensive **Center for Ecoliteracy** project that provides helpful information on topics related to redesigning school lunch programs.

The diagram illustrates our systems approach to integrating school lunch programs with curriculum, improving student health and behavior, and creating sustainable communities.

School administrators, food service directors, teachers, and parents will each approach this project from their unique perspective. Readers can begin with the topic that interests them most, then explore the other related topics.

The entire Rethinking School Lunch project is available at: www.ecoliteracy.org/rethinking/rsll.html





front line. There wasn't really the support for someone to work on the policy level. But the front line is a place where I could show that change is possible. And then hopefully, the policy process here in Healdsburg will follow.

My daughters and I have been here in Healdsburg for six years. Our school district is beyond broke, and many families with school-age children can barely afford to live here anymore. They are moving out, and more expensive homes are moving in. Therefore, the school enrollment district-wide has dropped just in the time we have been here.

My first year assignment was to open up the program with the district at the junior high kitchen. About the time I got here, some nutrition education funds from the SHAPE program were offered and I had had some experience with them. I didn't know one person here in terms of building a team, but I knew it was the right kind of funding for here, so I wrote a grant and got \$30,000 for the junior high program. I made the executive decision of no soda, no junk, and I said we're not only going to do that, we're going to try something new.

We launched the program at the junior high, but I had to reel my vision back in as soon I got to know the people. The junior high kitchen is a production kitchen. I would redesign it now because originally it was set up as a snack bar for fast food. I would really encourage any new school that is building a new facility or changing an old one to have a very open, beautiful serving line that everyone eats from—open, with beautiful presentation, where the food is right there for the kids. We are held back by the design of our current facility from the kind of service that we would like to do. We've struggled with that. But even with that, we've had to move forward.

We've done what we can to market all the food to all the kids. We had fresh hot food coming out all the windows, especially during the first year and into the second year at the middle school. We've

Case Study Implementing a Farm-to-School Lunch Program in the Healdsburg (California) Unified School District.

by *Nancy May, food service supervisor for the Healdsburg Unified School District*

My advice for anyone who wants to implement a farm-to-school program is to start anywhere, start somewhere. Start as small as you need to start to be manageable and successful. If it means one meal, once a month and the ripples spread, just however small. In a school district, if there is a site that might be better because it has better facilities, and if a willing parent group or teacher is excited and enthusiastic, then start there, where something is in place. Maybe a farmer has a child who attends school in the district. There are lots of places to begin.

I've worked on change at the state policy level, but right now it makes more sense for me to devote my attention to working the

offered samples and taste tests. We've gone into the classrooms and done cooking in the classroom. We've marketed our program in so many ways; two for ones, information tables in the cafeteria. We brought in Odwalla drinks. Kids didn't want to try the green drinks until their friends tried them and liked them, and then it was okay. We did taste-testing with the kids of anything healthy that we could think of that we thought kids might like.

Many kids were coming to school without breakfast and getting Funtions and Diet Pepsi at first break. That's what many of the returning 8th grade students were eating when I arrived. A lot of these kids hadn't eaten with us in the new program yet. The junior high kids are experiencing bringing their own money to school to buy à la carte and snack food for the first time. It takes some doing to get them accustomed to the new foods that we're serving.

One of the things that we did to build relationships within our school community—which I realized was the key to building trust—was to get everyone familiar with what everyone else was doing. This was not the case before. We tried a guest chef thing, so that once a month we would invite a guest chef from within the school community. The format for these events was using some of our select USDA commodities, fresh produce, and different cultural kinds of meals. The first guest chef we had was head of maintenance of that site. He cooked this beautiful Cajun meal because that was his background. One of the school board members did garlic mashed potatoes and roasted chicken. We served the entire junior high, which was our experimental site for one and a half years, as long as the grant funding lasted.

A lot of the first year menus that I wrote used the familiar packaged frozen burritos, but we would add a good fresh salad and some fruit, like kiwis, which all becomes a part of the education. I know a lot of these kids eat fast food, but they can learn by our example what a well-rounded, nutritious meal can be. So we served the packaged burrito, added some healthy salad and fruit, and it was a worthwhile

step in the right direction. After a little while, we pulled the packaged burrito and replaced it with a healthier version of our own making. By that time the kids were ready to say, "This is great!" because by then their tastes were beginning to tune into something different.

From there, that rolled into reopening one of our elementary school sites that had a kitchen. That was a likely place to start. That just took off. Our participation went off the charts. That kitchen is also the site that transports to a small district that doesn't have any type of kitchen facilities, so they come over to pick up the meals we prepare. Soon the other sites began to say, "Hey, what about us?"

By the end of that next year we were ready to go, and our food staff members were hands on hips, but eyes sparkling. This is not easy, and it was not an easy transition. Now, there may have been grumbling, but their eyes were shining the whole time because they were cooking and creating and being included and involved. Fall 2000, we opened the high school kitchen which now serves as a district central kitchen.

Building relationships was so key to us moving along together. The food staff members were into it. I could tell from the very first time I mentioned the idea that there was a spark there and that this was going to be good. A lot of these women have been here for many, many years, prior to the prepackaged meals, so they came forth with all their stories of how it used to be. So they had life coming back into them around their profession. There is a great sense of pride and ownership in their life skills, so when we tapped into that, that's when things really took off.

A big part of it is that this new style of food service ushered them, and all of us, out of our comfort zone. It was a stage-by-stage thing. The first couple of years that I was here, we were still funded for professional development days through the grant, so we had actual work days when the kids weren't here. We did some training then, but really any staff training has to be on the job, which has its

challenges. But when people are into what they are doing they bend more than if it's just being imposed on them.

For staff development, we've done cooking projects that emphasized how to produce something and how to eliminate a lot of the fat and the salt—how to use fresh food and not packaged, and how to look at the menu and create the simplest menu possible. We developed a strong focus on production and serving. This is separate from the accounting and production records we are mandated to keep. We spent time on how to look at the whole menu, keeping all the parts that they are responsible for in mind.

It's important to remember that people learn in different ways.

Some will get it in the setting of one day's lesson. Others won't fully understand it until they have the opportunity to apply it. But over the course of time, people are getting it. There is so much more problem-solving going on now. The staff hardly comes into my office anymore to solve problems. They're figuring it out. That continues to happen.

What's so gratifying is to see the spark of how good they feel about themselves, and how they are with the food and the kids. That's how they need to be. I have stressed that you have to be in a good way around this food and these kids, and if you're not, then we need to figure out what is going on. Our perspective is that we have the honor of providing meals for kids. And I love my staff for the high level of connection that is going on around what they are doing. It really shows up in our participation numbers. No one ever complains about our food, ever.

It's unfortunate that mealtime is not honored or recognized by school districts as it should be. That time is not protected, not set aside and staffed in an honorable way. It's a far less than good situation. Our district is 55 percent Free and Reduced eligible, but that is not a clear reflection of community need. There are still a lot of students out in the community that could benefit from our services. At the elementary sites, we're serving over half of the

enrollment in the schools. About a quarter of the kids in junior and high school eat with us. Those numbers would be even higher if our lines weren't so long, and our lines wouldn't be so long if our facilities were different.

The National School Lunch and School Breakfast programs hold us to many, many regulations around the school meal initiative (SMI) review. We're offered several different options on how to account for the nutrition components in our meals. The other part of it is the eligibility applications. Both those aspects are really scrutinized every five years. Our district had just been reviewed before I got here. So this whole five years that I've been here, we've been enacting these sweeping improvements in the school meal program. The whole goal was to create a program that was fiscally sound and could pass the USDA review with fresh, simple, good meals.

Last spring, we had our review and our reviewer was here for a week and went through every single piece of paper, nutrient, and menu—it's an extremely thorough review. And we passed. As far as the meals went, she really had to stretch her brain to take a look at some of these menus because we've done some different things. Like with tamales, we have a good commercial purveyor for tamales, but these tamales don't quite have enough protein for our bigger kids to qualify for our two ounces of meat/meat alternate. We supplement protein by serving chips and a really good homemade bean dip or savory, hot beans. That's the entrée—those two things, rather than one contained unit.

I spent a week by our reviewer's side as she asked, "What's this, what's that, how do you deal with this, what's going on here?" I would explain our way of meeting the nutritional requirements to her. It had to make sense to her from her perspective. It took some working with her to get her into the flow, so to speak, of how we're doing things here. Nowadays, a lot of outside vendors are producing entrées that already meet these regulations for the USDA. That's a convenient, grab-and-go thing for schools.

A formula for me in developing our own menus is: a hot entrée, fresh veggies, one other item, which is typically a grain bread, and then fresh fruit. I keep it simple, and I keep it open, and depending on what's seasonal and fresh and available, we can plug it in. For example, we had a frost two weeks ago so that suddenly ended tomatoes and peppers locally. Because I'm not so specific, it's okay. I just fill it in with something fresh and local that I can get.

Food-based menu planning is one of the options the USDA offers to schools. It's not computer-based. Of course, it is easier if you are getting prepackaged meals, since a lot of the nutritional analysis is taken care of for you because it is completely standardized. But if you are doing fresh food production, it's a bit more challenging because you have to look up all of the ingredients and figure it out yourself. Again, it consumes a little more time, but it's manageable.

The USDA commodity program also publishes a cookbook that contains a lot of nutrient serving information. So we have relied on some of that. But food-based menu planning is an old way of figuring out the nutritional component, used at a time when kitchens were well staffed. You know, people to run the mixer, take the change, run the nutritional analysis. So we've had to really modify these recipes according to the level of staffing that we have. So again, there's so many "You can't's", but you *can*!

We've done a lot of different kinds of menus over the years and I've had to reel in my big vision and modify it by site. You need to meet people, and staff in particular, where they are. If a particular staff group really isn't there yet, then we modify the menu for them, but with that same basic concept of good and fresh—we'll never sacrifice that part of it.

An area of real interest for me is to watch the quality of the USDA commodity food program that we rely on steadily improve, and to see the politics around how that food is distributed. We know several months in advance what commodity foods will be offered,

and we can choose from that published list. There's a large inventory of commodity food that I'd never consider, but there are a surprising number of decent products too, especially if used as ingredients with fresh things.

For example, there are really good deli turkey roasts that come in raw. We roast and season them, slice them, and make a sub sandwich with them. We add local downtown bakery bread, local lettuce and tomatoes when they are in season, and turkey. And so the turkey roasts are \$2.70 for 40 pounds. If you use them for protein, then you can afford a good roll, and you can afford a few extra cents for a nice helping of fresh, locally grown lettuce. The bean salad that goes with our tamales is all commodity beans, and then canned kidneys and garbanzos. Bean and cheese burritos have commodity beans and cheese, seasoned really well, with fresh cilantro. Soups and chilies are made at the end of the week. We use up the veggies and other things that won't last until the following week. That all goes into the soups, perhaps with some commodity pasta. The kids love that.

Doing business with the farmers depends on what season it is, and what's happening on the farm. For example, right now in Northern California we're in early winter. We're going into a period where the farmers are saying, "I won't be seeing you for awhile." Just today a farmer let me know that this delivery of apples may be the last until next year. We've had a freeze, so it's going to be a little while until we're back on track for the lettuces and peas. It could take until February or March. So we've got some weeks to go before all the fresh local produce is back in production. There's no local citrus grown right here, but there's regional citrus, and so we have to broaden our buying circle. It's a real learning experience dealing with seasonal production, but it's bringing us all closer to this place.

I started working with farmers about three years ago. Generally, I've worked with about seven or eight farmers. Not all of them at the same time. Sometimes it's really busy and sometimes it's not. Most of the time, I created relationships with these farmers by calling

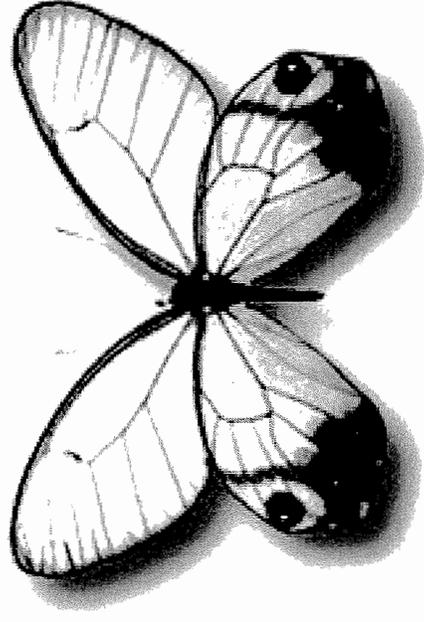
them on the phone. I let them know that the district was interested in purchasing fresh local produce and products. But I've also had them call me. There's a wonderful pear grower over in Lake County who heard about what we're doing over here with the food in the schools. He has beautiful, beautiful organic pears, several different varieties, and it's regional enough for me. He brings his fruit over here for us.

It can be time consuming in terms of being in touch with them, creating purchase orders, getting them paid, but not insurmountable. In a district that has any type of clerical support it would be easy to do that. In our case, it's me doing all of it and it's a little bit more time consuming. But for the sake of building this program and what we're creating together, it's okay with me to do that. We work with Love Farm here in town, and Ed Miller at Carrot Top Farm, and there's Dry Creek Peach and Produce. We get the most delicious peaches from them. There are local kiwis.

The main thing is building and maintaining these valuable relationships. To me, farmers are artists. I need to be flexible with them and meet them in the middle with pricing. They have been extremely gracious with us, and they are excited to be with schools and kids and moving something positive forward through our schools. They understand that there's so much good education going on around that.

If you ask me what success looks like here, it looks like cleaning up the food supply even more. In terms of how we purchase, we are moving toward more and more organic. That's the goal. Being able to be in the classroom more. We are holding that vision for how we take care of our kids and always looking to do better. In terms of the food, it means good, fresh, and close, with more attention to the values in the commodity food program.

Nancy May has been the food service supervisor for the Healdsburg (California) Unified School District for the past six years. Before moving to Healdsburg, May was the food service director of the Lagunitas (California) School District, where she oversaw the opening of the school cafeteria and worked with SHAPE grant funding to start gardens throughout the school district linked to nutrition education and cooking classes. May has held management positions with numerous restaurants and conference centers and studied restaurant and hotel management at the University of Nevada.



Seasonal Lunch Menus

Prepared for the Center for Ecoliteracy by Nancy May, food service director, Healdsburg Unified School District, Healdsburg, California

Introduction

The following school lunch menus represent a creative shift to a farm-to-school approach to food services. They are similar to menus already being served in many school lunch programs but include significant enhancements.

These menus illustrate how seasonal, local, and fresh ingredients can augment the nutritional content and appeal of school meals while adding very little to the bottom line. As these fresher, tastier, more nutritious meals attract new students to the program, sales and revenues increase. Positive changes also gain the attention of parents, earning their enthusiasm and confidence, thereby further raising participation levels.

These menus offer useful and practical suggestions that lead the way to a farm-to-school approach and provide an opening for positive change within the reach of most school meal programs.

(Continued on page 13)



Seasonal Lunch Menus

Fall Menus

Menu 1	Menu 2	Menu 3	Menu 4	Menu 5
Chicken Fajitas	Turkey Sub Sandwiches	Pizza	Enchiladas	Pasta with Red Sauce
Jicama with Lime	Sweet Corn Salad	Fresh Veggie Cup	Crunchy Green beans	Armenian Cucumber Slices
Chips and Salsa	Cookies	Brownies	Chips and Salsa	Garlic Bread
Fresh Grapes	Asian Pears	Red and Golden Pears	Fuji Apples	Fresh Melon Wedges

Winter Menus

Menu 1	Menu 2	Menu 3	Menu 4	Menu 5
Tortilla Soup	Lasagne	Grilled Cheese Sandwich	Roasted Chicken	Chili
Mexican Rice	Caesar Salad	Winter Greens Salad	Apple Cabbage Slaw	Baby Carrots with Poppy Seed Dip
Jicama Orange Salad	Multigrain Roll and Butter	Roasted Potatoes	Pumpkin Nut Bread	Cornbread with Butter
Churro	Meyer Lemon Pudding	Faraway Fruit! Pineapple!	Tangerines	Kiwis
	Mandarin Oranges			

Spring Menus

Menu 1	Menu 2	Menu 3	Menu 4	Menu 5
Tamales	Turkey Sub Sandwiches	Teriyaki Chicken	Pizza	Chicken Rice Burritos
Bean Dip/Frijoles	Broccoli Raisin Salad	Veggie Fried Rice	Pasta Salad	Jicama with Lime
Baby Carrots and Pea Pods	Fresh Strawberries	Sugar Snap Peas	Brownies	Chips & Salsa
Chips and Salsa		Oranges	Strawberries	Pears
Faraway Fruit! Papaya!				

Fall Menus

Fall Menu 1

Chicken Fajitas

Use bountiful sweet peppers cut in strips, sautéed in a bit of oil. Combine with cooked diced or shredded chicken, grated cheese, and serve with good thick tortillas (local, if possible), that have been wrapped in foil and warmed in the oven.

Jicama with Lime

Jicama is a crunchy tuber that is available from produce vendors as sticks—specify FRESH. Kids love these with a squeeze of fresh lime and a shake of chili powder.

Chips & Salsa

Homemade salsa is best, but the USDA product is very good. Enhance it with fresh cilantro, chopped cucumbers or other fresh vegetables.

Fresh Grapes

These are often available fresh from local sources in the first several weeks of school. Student helpers are great at cutting portion bunches with scissors. Present a variety of colorful and delicious grapes from your region.

Fall Menu 2

Turkey Sub Sandwiches

Use USDA uncooked turkey roasts, and prepare them yourself, well seasoned with salt, pepper, and herbs. This allows more portion cost to be used for good local bread and fresh produce such as local tomatoes, lettuces, and cucumbers. Kids love subs, so it's a great way to get fresh vegetables in them.

Sweet Corn Salad

Use fresh corn if you have the staff to shuck, and cut kernels. Otherwise USDA canned is a good straightforward product. Add a lot of diced different colored fresh, local, raw sweet peppers, celery, and a bit of onion.

Cookies

Bake these fresh from your favorite recipe. Depending on staffing, make up a large batch of dough monthly, parcel out week by week. If staff is short, there are very decent commercial doughs available as 1 oz. portions.

Asian Pears

We buy the smallest size fruit from local farmers—these are not as commercially viable for the farmers, but the perfect size for school lunches, so we all benefit! Talk to the farmers.

Fall Menu 3

Pizza

Homemade is best, if you have the staff. Commodity product can be enhanced with lots of good fresh produce such as mushrooms, bell peppers, onions, zucchini, and black olives. It provides an example of how a prepared entrée can become part of an overall good fresh meal.

Fresh Veggie Cup

In Autumn, you can find a variety of sweet bell peppers, cucumbers and green beans. Slice the peppers and cucumbers into strips and combine with green beans—beautiful and well liked.

Brownies

Again, homemade are best, if possible. Otherwise get samples of commercial mixes from your vendor and enhance them with fresh applesauce or fruit purée.

Red and Golden Pears

These are so stunning, beautiful, and delicious when served at their peak ripeness time. Keep your eye on them in storage so they aren't served rock hard or mushy. It's valuable education for kids to be served properly ripened fruit. So many children aren't exposed to this incredible and important experience!

Fall Menu 4

Enchiladas

Make a simple and delicious layered casserole by adding minced vegetables added to commercial enchilada sauce, heated, then combine with corn tortillas and cheese.

Crunchy Green Beans

These seasonal favorites speak for themselves! In the first season of serving so much fresh raw produce we used 1 oz. portions of homemade Ranch dressing as a dip. The whole idea is to get kids to try something new and Ranch dressing makes it “familiar.” After they develop a taste for the new foods, now we serve mostly just fresh, plain, raw vegetables, which saves labor and production time.

Chips & Salsa

Homemade salsa is best, but the USDA product is acceptable. Enhance it with fresh cilantro, chopped cucumbers or other fresh vegetables.

Fuji Apples

As with Asian Pears, try purchasing small fruit in season from local farmers.

Fall Menu 5

Pasta with Red Sauce

This sauce is good, simple, tasty, and inexpensive to produce. We make sauces and soups at the end of the week with the fresh produce that is no longer at peak quality for the fresh veggie cup serving. We enhance this pasta sauce with chopped carrots, celery, zucchini, bell peppers, or other vegetables we have on hand.

Armenian Cucumber Slices

These are sweet and crunchy. Cut them into long sticks or rounds. Regular cucumbers may be substituted.

Garlic Bread

This is a great use of leftover bread, whether fresh or frozen. Spread bread with olive oil, butter, minced fresh garlic, and a sprinkle of school garden parsley, oregano, or other herbs.

Fresh Melon Wedges

This is usually the first thing eaten at lunch! We wash them well and cut into wedges with the rind on so kids can check out the different varieties. Honeydew, cantaloupe, and watermelon all work well.

Winter Menus

Winter Menu 1

Tortilla Soup

Make a soup with basic chicken stock, good fresh carrots, celery, garlic, white onions, and shredded chicken. Place tortilla chips in bowls then ladle hot soup on top. You can make a meatless version but it must be served with a protein source.

Mexican Rice

Brown dry, uncooked rice on a griddle or in a large fry pan, stirring constantly until golden and fragrant. Put rice in hotel pans with simple stock or water, diced tomatoes, and seasonings. Cover tightly and bake for about 15 minutes in a 450°F oven, then another 25 minutes at 350°F. It's easy to produce and transports well.

Jicama Orange Salad

This is an easy Mexican recipe. Combine jicama sticks with orange sections and add salt and cilantro, if available. Jicama sticks may be purchased to ease production.

Churro

We use a commercial product, but we roll it in minimal sugar and good Mexican cinnamon. We serve ½-stick portions.

Winter Menu 2

Lasagna

We use our vegetable enhanced sauce and grate zucchini into the ricotta mixture. Cheeses provide the protein. Add school garden herbs to the ricotta mixture and/or the sauce. This is a great way to use school garden herbs.

Caesar Salad

This is a great salad for school garden greens. Croutons help many kids accept leafy green salads more readily. We make a big batch of simple creamy Italian style dressing from scratch, but you can enhance a dry commercial product with fresh ingredients.

Multigrain Roll with Butter

We buy these fresh from a local baker in 2 oz. portions.

Meyer Lemon Pudding

Meyer lemons are sweeter than other lemons and are fantastic to cook with especially in salad dressings, and desserts. If they are not available in your area, use regular lemons and adjust for sweetness. Add lots of grated lemon zest to a basic vanilla pudding or blend together lemon juice and powdered sugar and top each portion with a generous drizzle of the sweet juice mixture.

Mandarin Oranges

These are easy for kids to peel which greatly minimizes chances of whole fruit getting tossed in the garbage.

Winter Menu 3

Grilled Cheese Sandwich

This is a basic favorite we make with local, fresh bread. Brushing the bread with olive oil and baking the sandwiches in the oven is simplest.

Winter Greens Salad

Make this with greens from the school garden or a local farm. Toss with a citrus dressing.

Roasted Potatoes

Cut a variety of potatoes into chunks, including Finnish, Yukon Golds, and Reds. Toss in olive oil and herbs, salt lightly, and bake. Kids love this. A variety of potatoes is great looking and stirs imagination and curiosity.

Faraway Fruit! Fresh Pineapple

When we serve tropical fruit, we do a mid-winter education about local produce being less available and about where the pineapple comes from.

Winter Menu 4

Roasted Chicken Toss chicken pieces with olive oil, minced garden herbs, salt, and pepper. Bake in a hot oven. This is well loved.

Apple Cabbage Slaw Shred cabbage, grate apples, and mix with a simple dressing. This makes a great class project.

Pumpkin Nut Bread We make a basic quickbread using canned pumpkin. It's fragrant and nutritious.

Tangerines Look for ones that are seedless and easy to peel.

Winter Menu 5

Chili As with red sauce and soups, we use less than plate-perfect vegetables to make this popular recipe. Cook any combination of beans until soft. Add a sauté of well seasoned onions, peppers, tomatoes, and other vegetables. Top with grated cheese.

Baby Carrots and Celery with Poppy Seed Dip Combine mid-winter available fresh produce with an easy and somewhat sweet dip.

Cornbread with Butter As with brownies, homemade is best but check with vendors for the best commercial brands. You can add corn, chopped sweet bells, or jalapeños, depending on your students' tastes.

Kiwis Wash these well, cut in halves—or quarters for the littlest kids. As with all fresh fruit, be sure the kiwis are soft, ripe, and sweet before serving. Kids love to scoop them out with a spoon.

Spring Menus

Spring Menu 1

Tamales

They have great commercial products available that are easy to prepare and transport. These do not provide sufficient Meat/Meat Alternative (MMA) for older kids (according to “Food-based Menu Planning”) so we supplement with simple savory Bean Dip/Frijoles.

Bean Dip/Frijoles

Cook pintos or black beans until soft and season with salt, cumin, and oregano. Purée or serve beans whole. It’s a simple and inexpensive nutritional accompaniment to tamales.

Baby Carrots and Pea Pods

These are colorful, crunchy, and well liked.

Chips & Salsa

Homemade salsa is best, but the USDA product is very good. Enhance it with fresh cilantro, chopped cucumbers or other fresh vegetables.

Faraway Fruit! Papaya!

We do a mid-winter education about local produce being less available and about where the papayas come from.

Spring Menu 2

Turkey Sub Sandwiches

Use good quality USDA uncooked turkey roasts, and prepare them yourself, well seasoned with salt, pepper, and herbs. This allows more portion cost to be used for good local bread and the freshest produce. In spring, use lots of good fresh greens. Veggie Subs are very well-liked by older kids. Use a variety of vegetables and cheeses.

Broccoli Raisin Salad

When kids get to make this in class they recognize it and enjoy it at lunch. Use raw broccoli florets and stems with the tough, fibrous outer “skin” removed, then chopped into bite-size pieces. Add raisins, walnuts, and a bit of red onion (optional).

Fresh Strawberries

When these are local, organic, and seasonal – they speak for themselves!

Spring Menu 3

Teriyaki Chicken

Coat chicken pieces with a marinade of soy sauce, brown sugar, garlic, and ginger, then bake.

Veggie Fried Rice

Start with cold, cooked rice with separate grains. Cut up a variety of vegetables including carrots, celery, and onions. Toss vegetables and rice together on an oiled griddle. Add soy sauce and stir well. This is easy to produce and transports well.

Sugar Snap Peas

These are a welcome spring arrival! Wash and serve.

Oranges

Cold and juicy wedges are great with this meal as the citrus season winds down.

Spring Menu 4

Pizza

Homemade is best, if you have the staff. Commodity product can be enhanced with lots of good fresh produce such as mushrooms, bell peppers, onions, zucchini, and black olives. It provides an example of how a prepared entrée can be part of an overall good fresh meal.

Pasta Salad

Go light on the pasta and add lots of cut up vegetables such as celery, peas, olives, or whatever is in season that your kids enjoy. Dress with a light vinaigrette.

Brownies

Homemade is best, if possible. Otherwise get samples of commercial mixes from your vendor and enhance them with applesauce or fruit purée.

Strawberries

When these are local, organic, and seasonal, kids never tire of them.

Spring Menu 5

Chicken Rice Burritos

Seasoned diced chicken tossed with chopped fresh vegetables, fresh herbs, and leftover rice make an easy and great filling. Roll filling in flour tortillas with a little cheese. Burritos can be prepared in stages and transports well.

Jicama with Lime

Jicama is a crunchy tuber that is available from produce vendors as sticks—specify FRESH. Kids love these with a squeeze of fresh lime and a shake of chili powder.

Chips & Salsa

Homemade salsa is best, but the USDA product is acceptable. Enhance it with fresh cilantro, chopped cucumbers or other fresh, seasonal vegetables.

Pears

Use ripe, late season varieties. Keep your eye on them in storage so that they are served at peak ripeness.



Food and Health Resources

Check the Food Odometer: Comparing Food Miles for Local Versus Conventional Sales to Iowa Institutions

Rich Pirog and Andrew Benjamin

This University of Iowa-sponsored study documents the large difference in miles traveled between items bought locally and those bought through “conventional” channels. (PDF: 8 pages)

www.leopold.iastate.edu/pubinfo/papersspeeches/food_travel072103.pdf

Eight Component Model for Coordinated School Health Program

This Centers for Disease Control schema elevates nutrition/health education to equal status with other parts of the curriculum. (PDF: 8 pages)

www.cdc.gov/nccdphp/dash/conference/archive/2002/conference/abstracts-access01.htm

Guidelines for School Health Programs to Promote Lifelong Healthy Eating

These guidelines developed by the Centers for Disease Control, affirm, “Healthy eating patterns in childhood and adolescence promote optimal childhood health, growth, and intellectual development . . .”

www.cdc.gov/mmwr/preview/mmwrhtml/mm0042446.htm

Nutrition Services: An Essential Component of Comprehensive School Health Programs

Marilyn Briggs, SeAnne Safai, Deborah Lane Beall

This joint position of the American Dietetic Association, the Society for Nutrition Education, and the American School Food Service Association calls for comprehensive, sequential nutrition curricula

integrated with child nutrition programs providing nutritious meals and snacks as part of all K-12 education. It emphasizes the need for schools to accept responsibility for preparing people for lives as healthy, productive adults.

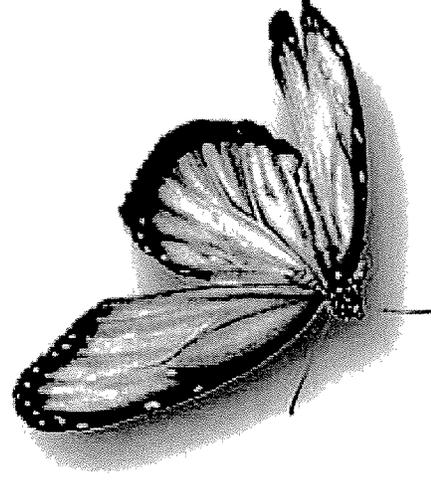
www.eatright.org/Public/GovernmentAffairs/92_8243.cfm

Weston A. Price Foundation

The Weston A. Price Foundation is dedicated to restoring nutrient-dense foods to the human diet through education, research and activism. The WAPF website provides information on nutrition, diet, and health. The Foundation’s quarterly journal, *Wise Traditions* in Food, Farming, and the Healing Arts, is dedicated to exploring the scientific validation of dietary, agricultural and medical traditions throughout the world. It features illuminating and thought-provoking articles on current scientific research; human diets; non-toxic agriculture, and holistic therapies. The journal also serves as a reference for sources of foods that have been conscientiously grown and processed.

www.westonaprice.org

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