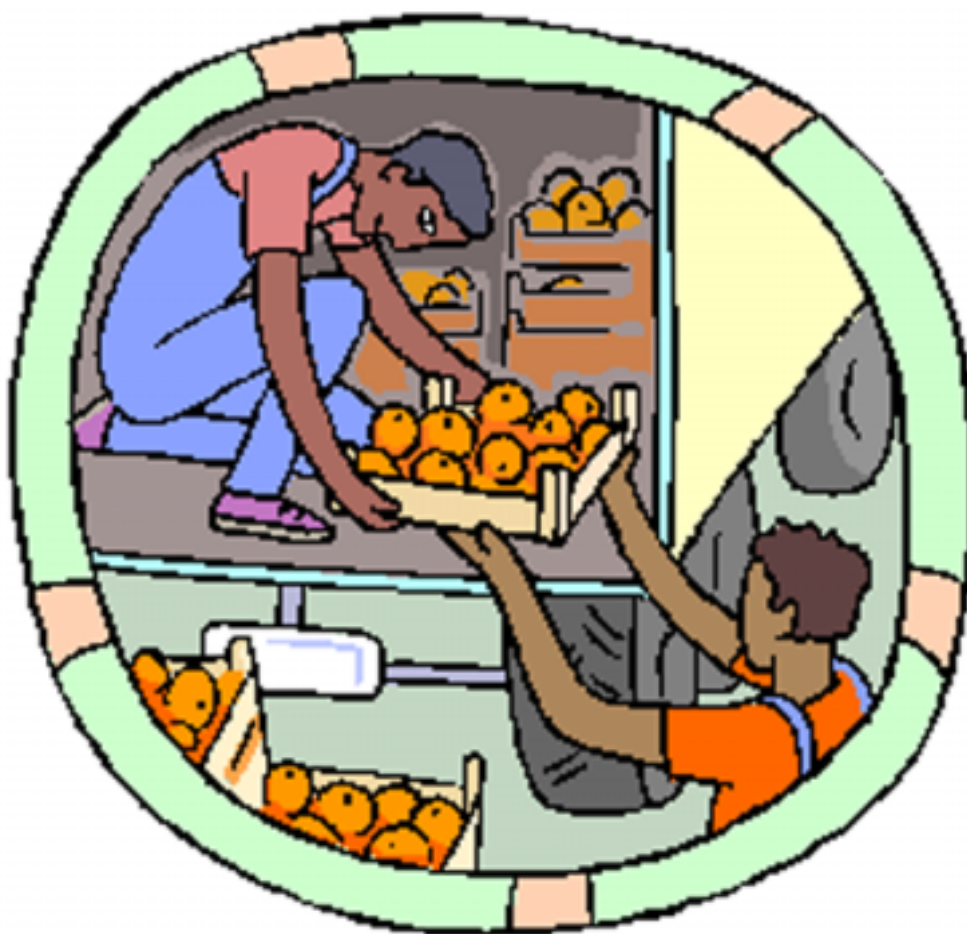


Farm to School

*An Introduction for Food Service Professionals,
Food Educators, Parents and Community Leaders*



National Farm to School Program

2003

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*An Introduction for Food Service Professionals,
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**National Farm to School Program
2003**

How to Use this Book

Farm to school programs can be challenging to implement, requiring cooperation from school food service directors and staff, school administrators, parents, teachers, students, and of course, local farmers. This manual is a tool for introducing school food service professionals to the idea of purchasing regional and seasonal foods for school meals directly from farmers in their communities. The “Dialogue” pages in the back of this manual have been used in training for food service directors and cafeteria managers. They are meant to help begin the discussion “why farm to school?” and to establish common ground among farm to school stakeholders. When using this manual for training, it is useful to include regional information about agriculture, the seasonality of food production, and how to contact local farmers.

This publication may also be helpful for food educators, teachers, parents, and school administrators. Case studies provide details on how several different farm to school programs got started in various U.S. regions. Resources specific to regions and states are located in the back of the manual.



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FARM TO SCHOOL

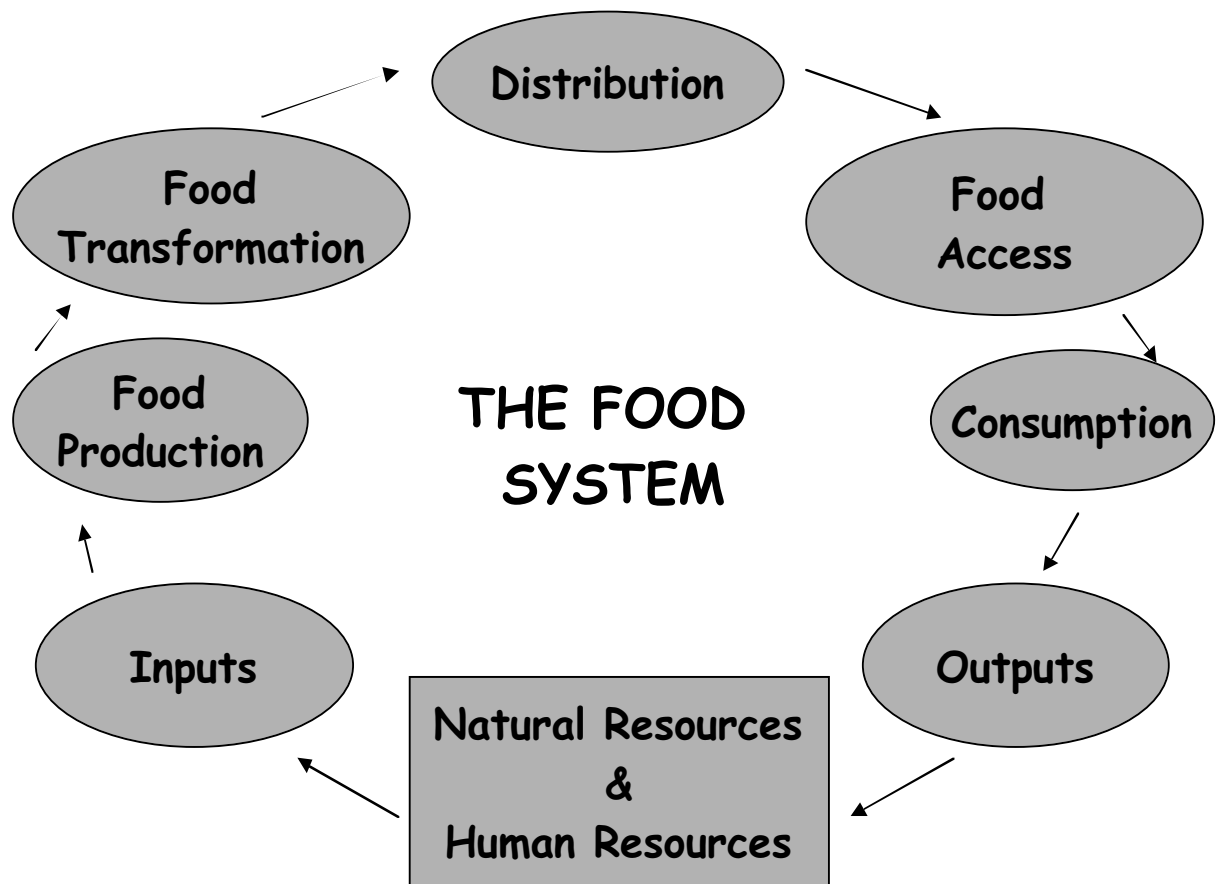
Farm to School: An Introduction

Connecting school meals with local agriculture by purchasing direct from local farmers is a strategy that can increase the profitability of farming, improve the quality of school meals, and re-create relationships in the community among consumers, the people who grow food, and the land.

Farms and school systems are both important parts of a community. At some point between the inception of the National School Lunch Program and the present, many school food services have lost their connection to local food production. Because school meals are supported by federal tax dollars (approximately 5.5 billion annually), efforts have been made to minimize the cost of foods served at lunch by making use of surplus commodities and large scale food distributors who can source foods from numerous locations. Large distributors make ordering from one supplier simple and convenient for institutions. Economies of scale ensure that the cost of food is minimized.

More recently, the cost of labor has also been minimized with the use of pre-prepared foods that need only to be heated and served. Much on-site food preparation in schools has been eliminated. The result is that school children consume more highly processed foods and fewer fresh foods. There is often no connection between the meals they receive at school and the local people, the local environment, or the local economy. This lack of connection is of course not unique to meals eaten in school!

Fortunately, taxpayers are also farmers, teachers, food service directors, parents, members of school boards, and citizens. They have concerns other than minimizing costs. Many understand that feeding our growing children high quality nutritious food is a good investment that will pay off in the future. To understand the varied benefits and opportunities provided by farm to school programs, it is useful to put such programs in the context of the food system. School meals are an important part of the nation's food system, and the sourcing of foods for school meals will have a significant impact on the sustainability of local food systems in all U.S. regions.



The Food System

The food system can be defined as the process by which food is produced on a farm or fishery, transformed by processing, made available for purchase, consumed, and eventually discarded (see Figure above). It includes everything involved in creating food, its journey from the farm to the table, and the waste we are left with after the food is produced and consumed. We can think of the food system in terms of the global food system which includes food production, distribution, and consumption all over the world; or in terms of a local food system which includes

the sources of the local food supply and the parts of the food system that are owned and operated locally, or within the surrounding region. Very few, if any, local food systems are completely independent from the outside world. Most local food systems are integrated in some way with the regional, national, and global food system. The main parts of the food system are listed, defined, and briefly described below.

Parts of the Food System

Food System Inputs: An input is something that is put into a machine or system where it is converted into outputs. A system requires inputs to function. The food system involves numerous inputs of natural resources. Some

examples of inputs are soil, water, seeds, fertilizers, pesticides, compost, and nonrenewable fuels. Farm machinery, factories, and transportation systems are used for food production, processing, and distribution. In addition, the food system requires inputs of human resources including labor, research, and education.

Food Production refers to making or creating foods. Our food is “produced” (grown, raised, harvested, or caught) in a variety of settings including farms, greenhouses, orchards, and bodies of water. A region’s capacity for food production depends upon the soil, climate, terrain, and other geographic factors. In most temperate climates, there is a seasonal rhythm to production, or “growing season,” that varies in length depending on the location and crop. Fruits, vegetables, and grains are harvested at particular times of the year. On the other hand, most animal foods (dairy products, beef, poultry, pork etc.) can be raised and processed year round.

Food Transformation refers to a change in structure, composition, character, or condition. Raw unprocessed foods are often transformed before they are consumed. Foods are processed in factories, restaurants, food services, commercial kitchens, and in household kitchens. Some foods are processed in order to be edible (e.g. many animal foods). Others are processed for use in a variety of products (consider all the uses we have for tomatoes). Processed and packaged foods often can be stored much longer than their unprocessed or less processed counterparts. (Yogurt and cheese keep longer than milk, and canned vegetables can be stored much longer than fresh ones). Occasionally, the nutritional value of a food is increased as a result of processing

(e.g., fortified cereals). In other cases, the nutritional value of a food can be diminished by processing (e.g., when fiber and nutrients are removed from flour or other grains, or potatoes are made into potato chips).

Distribution is the act of dividing up, giving out, or delivering. With regard to food, distribution can mean the marketing, transportation, and retailing of products or commodities. Food products and ingredients are often transported from the site of production to a different site for processing and packaging. Once foods are processed and packaged, they are transported to warehouses for storage and organization, then to distribution centers, and finally to retail outlets or food service facilities. While some food distribution is local, food is currently transported over much of the world. Some foods travel many hundreds or even thousands of miles before they reach their final destination.

Food Access refers to the ability or freedom to obtain and make use of food. Most consumers first come into contact with food when it has reached a retail outlet, restaurant, or other food service operation. Consumers can purchase fresh and processed foods from farmers’ markets, supermarkets, convenience stores, specialty shops, food cooperatives, and health food stores. Our access to food is influenced by the marketing and advertising done on behalf of the food industry. Advertisements are a source of “information” in addition to being a source of persuasion for consumers. Such persuasion is becoming commonplace in schools, institutions that have traditionally been commercial free. The majority of people in this country do not have a problem purchasing the food they require. However, a percentage of Americans (more than 10%) lack

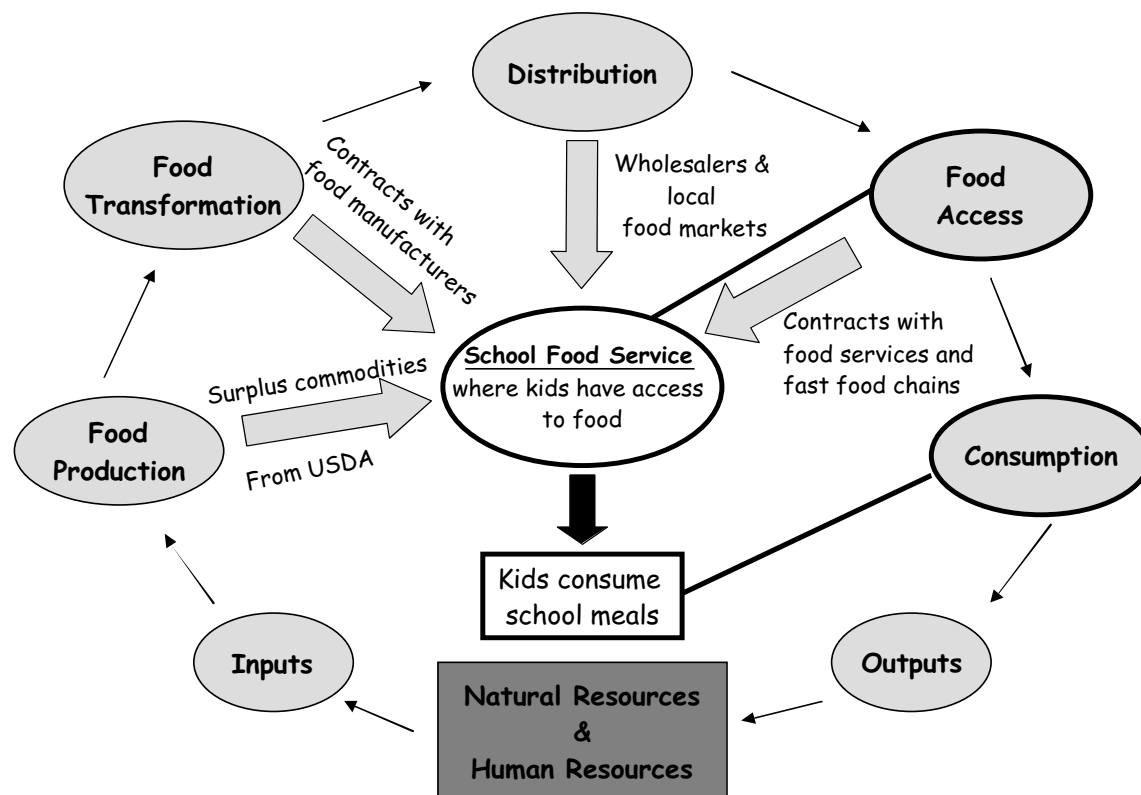
access to food for a variety of reasons. They may have limited incomes, difficulty getting to stores, or a lack of knowledge about healthful diets. When barriers to food access exist, many individuals and families have to obtain food through the emergency food system (food banks, community shelters, and soup kitchens), or receive publicly funded food assistance (e.g. Food Stamps; School Lunch; or the Women, Infants, and Children program -WIC). Those of us with limited access to food are at risk for hunger. Where hunger exists, it is a problem for the whole community.

Consumption refers to purchasing or eating food. Once we obtain food, we often must process it further in our own kitchens. Many factors are involved in our decisions about which foods to consume. Most people are interested in how much foods cost, how they taste, what they look like, and how nutritious and convenient they are. We all have certain dietary requirements. Our consumption habits can result in both positive and negative health consequences. Consuming a variety of foods in moderation is part of a healthful lifestyle. However, regardless of their nutritional value, we often consume the foods that are most available to us -- the foods we have access to at home, in our communities, and at school.

Outputs have been produced by a process or system. Food is the most important output produced by the food system. Aside from food, the food system also creates many undesirable outputs including pollution and solid waste. Pollution is created when agricultural inputs like synthetic pesticides and fertilizers run off into waterways or when fossil fuels are used for farm

machinery, transportation, or in food processing plants. Food packaging and other food waste is a significant component of the garbage we create at home. Certain types of food packaging can be reused or recycled. One important way to reuse and recycle food scraps is by composting. Compost can be added back to soil to increase its nutrient content and fertility.

Where Does School Lunch Come From in the Context of the Food System?



Farm to School Programs Address Food System Problems

In each sector of the food system, there are problems and issues that farm to school programs can address. For example, in the production sector, economic consolidation and the resulting economies of scale are making it difficult for small to medium scale farmers to compete and stay in business. However, small scale agriculture can make many positive contributions to communities; when small farms go out of business there are often negative consequences for communities. In

the food transformation, distribution and access sectors, enormous quantities of fossil fuels and other resources are spent transporting food from one side of the country to the other. In many cases, these same foods could be sourced regionally within seasonal constraints.

In the consumption sector, we have an obesity epidemic. The majority of adults in the U.S. and an increasing percentage of youth are overweight. The increasing prevalence of obesity is a multifactorial problem, but one

Where does school lunch come from in the context of the food system? Food service directors often order food from wholesalers that likewise obtain it in bulk from the cheapest sources. Surplus commodities grown

in any given state are provided to schools by the United States Department of Agriculture (USDA). Some school districts have contracts with food manufacturers, fast food chains, or food service management companies. Local food buying clubs, retail supermarkets, and specialty stores can also be sources of food for school lunch. In many cases, the food in school lunch comes from distant sources that lack connection to the school's community or to the regional economy. A school food service that has implemented a farm to school program might still depend on wholesalers and food manufacturers, but at least some portion of the school meals program would be supplied by local farmers, re-establishing those traditional community ties.



In some cases, farm to school programs create more stable markets for small farms, increasing their economic viability. Food comes from local sources, so transportation and natural resource consumption is not excessive. Food from nearby sources is fresher and can be tastier as a result, improving the quality and palatability of school meals. The increased quantity of fresh produce used in school meals usually means that children are eating more fruits and vegetables. Locally produced animal products such as meat, poultry, eggs, or dairy products can also be part of a farm to school program.

Who's Here to Help? Current Farm to School Initiatives...

USDA Initiative: Small Farms/ School Meals

A comprehensive approach to connecting small farms to school meal programs began in the summer of 1997. The USDA Small Farms/School Meals initiative encourages small farmers to sell fresh fruits and vegetables to schools and encourages schools to buy produce directly from small farmers. In this way, schools can incorporate fresh nutritious produce into school meals, and farmers can acquire new markets. In addition, school children can learn more about agriculture and how their food is produced when farmers visit their classrooms or when they take field trips to nearby farms. This USDA initiative encourages the cooperation of federal, state, and local entities. The USDA/Department of Defense (DoD) fresh produce project, USDA's Food and Nutrition Service (FNS), USDA's Rural Business-Cooperative Service, state departments of agriculture and education, and farm organizations have supported the initiative.

Department of Defense (DoD) Fresh Produce Project

The Department of Defense (DoD) has operated a nationwide system to purchase and distribute fresh produce to its military installations, Federal prisons, and veteran's hospitals. Starting in 1994, the DoD added schools to the list, and began to deliver fresh produce to children taking part in the National School Lunch Program. In partnerships with the FNS and USDA's Agricultural Marketing

Service (AMS), DoD began buying and delivering fresh fruits and vegetables to schools in eight states in the 1994-1995 school year. By 1997 this operation occurred in 32 states. Each year the DoD purchases and arranges for the delivery of approximately \$5-6 million worth of fresh fruit and vegetables directly to schools under a cooperative agreement with the Food and Nutrition Service and the Agricultural Marketing Service. The DoD Fresh Product Project does not exclusively purchase and deliver "local produce." *However, an interested food service director can contact the nearest DoD Produce Buying Office or Defense Subsistence Office to inquire about the possibility of using their services to specifically buy fresh produce that is locally grown.* A listing of addresses and contacts for DoD offices is located at the following Web site: <http://www.dsdp.dla.mil/subs/produce.htm>. Once at the site, click on "School Days News."

Community Food Security Coalition Farm to School Program

The Community Food Security Coalition (CFSC) is a nonprofit organization dedicated to building strong, sustainable, local and regional food systems that ensure access to affordable, nutritious, and culturally appropriate food for all people at all times. The Coalition seeks to develop self-reliance among all communities in obtaining their food and to create a system of growing, manufacturing, processing, making available, and selling food that is regionally based and grounded in the principles of justice, democracy, and sustainability. The Community Food Security Coalition Farm to School Program organizes workshops and presentations across the United States to inform people about farm to school projects, and to bring together farmers, school food service directors, parents, and community

organizers to address the barriers and opportunities involved in creating a Farm to School project. A Farm to School Program Director is available to provide technical assistance on a variety of farm to school topics. (See page 69 for web sites.)

Center for Food & Justice National Farm to School Program

The Center for Food & Justice (CFJ) works for a sustainable and socially just food system through collaborative action, policy development, community capacity building, research, and education. Funding for the National Farm to School Program, a consortium of nine organization in four states is administered through CFJ. The purpose of the consortium which began in 2001, was to begin piloting Farm to School projects, develop Farm to School training materials and resources, and conduct research and evaluation. The mission of the Center for Food & Justice is:

- 1) to improve access to fresh and healthy foods in all communities, particularly those where access is most limited.
- 2) to facilitate environmental, health promotion, community development, social justice, and land use strategies that empower local communities and strengthen the capacity of small family farmers.

The Center houses a National Farm to School Coordinator, a California Farm to School Coordinator, and local (Los Angeles) Health

School Food Organizers that have successfully negotiated a soda ban in the second largest school district in the U.S. (See page 68 for web sites).

Goals of the National Farm to School Program:

Improve farm income and school lunches by encouraging schools and school districts to:

- Provide children with access to fresh, tasty fruits and vegetables, vital sources of good nutrition.
- Help preserve a decentralized, secure food system and family farms in America.
- Connect children with the source of their food – the farms and farmers in their region.
- Teach children that their food choices matter: to their health, to the environment, and to the people who grow their food.



Farm to School projects are as different as the communities in which they exist. A major factor that influences how they operate is the local agriculture found in the region. The seasonality of crops can vary widely in

different parts of the country. The leadership for organizing farm to school projects has come from farmers, schools, parents, and community groups. School food service staff play key roles in design and implementation. Principals, students, school board members and teachers can also be influential in setting up a project. Some projects are organized from “the bottom up” –initiated by parents or farmers, while others have come from the “top down”– initiated by the school board or administration. The most successful efforts are inclusive of all parties, incorporating the ideas and concerns of all involved.

Getting Started

The school food service director can take the first step in beginning a farm to school program by learning about the number of small farms and farm cooperatives in the area and what each produces. Local County Extension agents can provide much useful information. Interested parents, and teachers can help arrange visits to nearby farms to meet with local producers and to provide some information about the kinds of foods that might be needed for school meals and in what form. It would be helpful to know about any Federal, State, or local exemptions to standard competitive bidding requirements when purchasing food commodities from local, minority-owned, women-owned, small and socially or economically disadvantaged businesses.

It may be practical to begin by introducing locally produced food items on a test basis. Local producers may be able to provide free samples to test in school kitchens. You can approach a farm to school program by seeing which items on the current school menu could be sourced locally, or by substituting some

locally grown items for similar items currently served. With a better understanding about agriculture in the region, school meals menus can be designed to take advantage of the local and seasonal food supply.

Resources for finding farmers in your community:

4-H Groups
Farmers’ Markets
Roadside Stands, U-Pick Farms, and CSAs
Farmer Cooperatives
Cooperative Extension
Small Farm Advisors (Coop. Extension)
Farm Bureau
State Department of Agriculture
Commodity Boards and Commissions
County Fairs
Farm Equipment Shows
Feed Supply and Farm Equipment Stores
Food Cooperatives or Health Food Stores
Organic Certification Organizations
Internet Sources (www.foodroutes.org & www.localharvest.org -- see pages 68-73 for more)

Working Successfully with Farmers

The most efficient way to work with farmers is to find a cooperative or other farm organization that can act on behalf of its members. A farm group can 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 an organization will simplify the procurement process for both the food service director 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.

Here are some items to keep in mind when approaching 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 from region to region. 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 with prospective buyers – others have very limited experience. Seek out farmers who sell at farmers' markets, restaurants, retail shops, and other known entities. Farmers who have established multiple marketing outlets will be more likely to work within your specifications and restraints.

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 have limited trucks and staff and will look for the most efficient way to deliver their products. This is where a cooperative or farm group can be very helpful.

Farmers' costs are upfront – they receive payment for their crops only when their 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. Payment details will have to be negotiated such that timing meets the needs of the farmer but is also practical for the school district.

Most experienced growers are familiar with and adhere to food safety regulations. Again, this is where those farmers who are selling to restaurants, at farmers' markets, or to retail stores, are already following all pertinent rules and regulations. Take the time to examine their product and the truck in which it is delivered. You may consider arranging an on-farm visit, as well. The farmer may need to have product liability insurance in order to supply food for school meals.



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.

Get Support from Others

The school food service director need not try to implement a farm to school program independently. 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 their ideas and concerns about school meals. The following list suggests who might be interested in taking part in an organizing meeting.

Who to involve from the school:

School Food Service Staff
Nutritionist
Principals
Teachers
School Nurse
Students
Parents and PTA Members
School Board Members

Others to involve in the community:

Environmental Organizations
Sustainable Agriculture Groups
Anti-Hunger and Food Security Organizations
County Health and Nutrition Staff
U.S. and State Departments of Agriculture

County Agriculture Commissioner
Representatives from Local Congressional and State Representative Offices
Local Government Officials

Educational Components of Farm to School Programs

Farm to school programs can include more than simply the procurement of food from regional sources. A farm to school program can have educational components as well. Linking farm to school with the curriculum is an opportunity to involve others.

In the cafeteria...

When students learn where their food comes from, it is an educational experience. The school food service director can communicate his or her efforts to include locally grown foods in school meals through posters, signage, or other promotional activities. Teachers and students could be involved in organizing such activities as well. Knowledge about the origin of our food supply contributes to agricultural and food literacy, and helps young people in particular develop a sense of place and connection to their communities.



In the classroom...

Farm to school programs are an excellent opportunity for school food service directors to initiate partnerships with teachers. Local food offerings in the cafeteria can be linked to or provide context for lessons and activities about food, nutrition, and agriculture in the classroom. The classroom can also be used for cooking lessons, or cooking demonstrations by local chefs, food educators, parents, or farmers. Unfortunately, opportunities for students to have hands-on experiences with food preparation have declined as emphasis on traditional home economics or family and consumer science classes has decreased. At home, time pressures prevent working parents from teaching these skills to their children. Therefore, opportunities to observe and practice food preparation skills in the classroom are more valuable than ever. Members of local chapters of national organizations such as *The Chef's Collaborative* or *Slow Food* may be able to provide food and cooking demonstrations using local foods (See Resources). The classroom can also be used as a growing lab. Watching plants grow, even on a small scale indoors can help students make the connection that food comes from the soil, and that soil requires our care.

In the school yard...

Most kids love to tend gardens, watch things grow, and eat the food plants they have nurtured. School gardens can contribute to teaching and learning in a variety of ways.

Planning and construction, plant biology, garden journaling, nutrition education, meal preparation, food safety, and economics lessons are just a few of the ways that gardens can be used in the curriculum. Explore the possibility of using produce from a school garden in school meals, or in classroom cooking lessons.



On field trips...

Farm to school programs can also include field trips to other locations to enhance learning about food and agriculture. Field trips to community gardens, local farms, farmers' markets or to a food processing facility that processes local foods can build and strengthen relationships in the community. For many small-scale farmers, hosting school field trips is part of a strategy for remaining economically viable. School children who have met the farmer who grows food for their school lunch program may be more enthusiastic about the fresh produce in their school meals.

Technical Aspects of Farm to School Programs: Overcoming Barriers

Potential barriers to starting a farm to school program will be unique for each school or school district. Initial concerns might include the containment of costs, the availability of produce during the school year, the convenience of buying fresh produce as compared to processed foods, additional labor costs, delivery complications, and food safety and quality. Many school food service directors, with the support of others at school and in the community, have devised creative strategies for overcoming barriers and developing successful farm to school programs in their districts. The case studies in the following section provide additional details on overcoming barriers.

Farmers are business people. They are accustomed to meeting their customers' needs, fulfilling special requests, and making deliveries. A farm to school program is about forming relationships with producers in the community and negotiating arrangements that benefit both parties as well as the community as a whole.

Food Procurement & Costs

Food cost is the actual cost of purchasing the raw food and products and related ingredients to produce the menu at the food service operation.

In some instances, buying direct from local suppliers may be more expensive. Tight budget allocations mean that many food service directors do not have the flexibility to pay more for fresh produce from multiple local

suppliers. However, buying certain items in sufficient quantity, as for the entire school district may significantly lower the price.

Many food service directors who order fresh produce are accustomed to ordering it directly from one food supplier that also supplies other packaged items. An advantage of ordering fresh produce directly from local farmers or local suppliers who source from local farmers is increased freshness and possibly more nutritious and palatable produce items. Some handling and transportation costs can be eliminated in this way also.

Specialty items and more perishable produce may also be more easily obtainable from local sources than from a supplier who sources from great distances. Access to fresh produce is expanded by sourcing direct from local farmers. Fresher items will be more acceptable to children, which may in turn increase their overall acceptance of fresh produce. Demand for vegetarian entrees and low fat side dishes on school lunch menus has been growing. A wider variety of produce may help food service directors satisfy these demands and increase participation in school meals. Increasing sales may be sufficient to offset any increased costs of buying from local sources.

Bidding Requirements

Competitive bidding requirements can make it difficult for food service directors to select a particular vendor unless that vendor submits the lowest bid for a particular contract. In some localities, certain contracts are exempt from standard procurement regulations if they fall below a specified monetary amount. That is, purchases less than a certain amount do not have to go through the competitive bidding process. Such rules will be specific to a school district.

In some states barriers have been overcome when farmers who want to supply food for school food service form a cooperative, marketing their products collectively to school districts. Compared to individual farmers, it may be easier for a cooperative to reliably deliver orders in a timely fashion in a manner that meets the quality specifications. A local coalition of parents, teachers, school administrators, and food service staff might be instrumental in encouraging the formation of such a farmer cooperative.

Product Availability

Many food service directors will find it easier to work with local suppliers who can deliver the same food items over an extended period of time during the school year. This makes it easier to plan menus and estimate food budgets. However, in many regions, certain fresh produce items will only be available during one season of the school year. The school food service director can become familiar with the seasonal variation and plan menus accordingly.

Transportation, Delivery, & Storage

Many school food service directors will need fresh produce to be delivered more than once per week due to limited refrigerated storage and high volume usage. School districts that have centralized their food delivery, storage, and preparation may be able to receive unprocessed fresh produce at one location, which is more easily accommodated by farmers who are making the deliveries themselves. In cases where the quantity of food needed is relatively small, a food service employee can pick up pre-ordered produce at a designated market site, such as a community farmers' market that operates once or twice per week. See the case studies in the following

section for some examples of how school districts have overcome transportation barriers.

Food Safety, Quality and Uniformity

Food safety and health issues are particularly important to food service directors who serve school meals to children. It is best to work with growers who already have established markets and a good understanding about food safety regulations.

School food service directors may shy away from sourcing direct from local farmers because doing so will require more labor in the form of chopping and preparing fresh produce items. Minimal kitchen preparation is important for minimizing labor costs and for dealing with labor shortages.

Freshness is typically very important for school food service directors, which is to the advantage of local suppliers. Farmers may be able to do some value adding to their fresh produce in order to make it acceptable and convenient for use in school meals. Any value-adding activities such as washing, cutting, chopping or packing fresh produce must occur in a state certified and health inspected facility.

Food service directors and their young customers will often prefer produce that is uniform in size and appearance. These requirements need to be communicated to potential local farmer suppliers, as well as packaging needs that are specific to a certain school or school district. Sometimes individual serving size packages are most desirable. A local food processor may be a useful “middle man” in a farm to school program by performing the food preparation services for which school food services and small farm operations cannot spare the time or labor.



Is This Legal?

The 2002 Farm Bill which includes the National School Lunch Act benefits farm to school programs in at least two ways. Language is now included in the National School Lunch Act which encourages schools to purchase local agricultural products. Section 4303 of the 2002 Farm Bill adds a new paragraph to section 9 of the Richard B. Russell National School Lunch Act. The provision requires the Secretary to encourage institutions participating in the school lunch and breakfast programs to purchase locally produced foods. The language states: *“The secretary shall encourage institutions participating in the school lunch program under this Act and the school breakfast program established by section 4 of the Child Nutrition Act of 1966 to purchase, in addition to other food purchases, locally produced foods for school meal programs, to the maximum extent practicable and*

appropriate...” Through this program, the USDA is taking a step beyond simply allowing these programs to encouraging them.

The second victory for farm to school is related to USDA *Community Food Projects* grants. Originally, the Community Food Security Coalition tried to create a new funding source specifically for farm to school projects. While this funding source was not created, the Coalition was successful in *doubling the amount of funds* available through the *Community Food Projects* grants program. These funds have been used in the past to develop farm to school projects. The doubling of these monies provides additional funding opportunities for project organizers. A request for proposals is usually available in the spring on the USDA web site (see Resources).

Case Studies of Successful Farm to School Programs

New Mexico

Movers and Shakers

The primary organizer behind the Farm to School project in Santa Fe is Lynn Walters. Lynn is a chef and previous restaurant owner as well as a concerned mother of two school-aged children. She is Program Coordinator of *Cooking with Kids*, a multicultural food education program. Lynn arranged a visit to the Santa Monica Farmers' Market Salad Bar for several school food service staff members and New Mexico Department of Agriculture Marketing Specialist Craig Mapel. The Director of Student Nutrition Services, Judi Jaquez, fondly calls Lynn "the thorn in her side" that moved her to support and develop a farm to school program in Santa Fe, New Mexico. Judi is a self-described "convert" who touts the flavor and quality of locally grown fresh fruits and vegetables.

Farm to School Project and Components

Initially three Santa Fe public schools participated in this project, two elementary and one high school. (Two additional elementary schools were added in the second year of the project.) One of the elementary schools has a salad bar every day. The meal at this site includes a meat entree three times a week and a vegetarian item twice a week. Another elementary school offers 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 big impact on the salad bar line. The first session conducted by Farms to Schools Coordinator Betsy Cull discussed proper salad bar etiquette as well as what is required for a reimbursable meal. Betsy followed the hands-on model of the Santa Monica Farmers' Market Salad Bar Program and brought the salad bar into the classroom for a lesson about food groups and portion sizes. The students were then able to prepare a tray to eat, practicing what they just learned.

Student Comments

"I've never tasted this stuff before; it's good"

"I love fruits and vegetables."

"I didn't use to like this kind of lettuce much, but I'm starting to like it more now that I've tasted it"

Funding

Three grants have provided start-up funds for this project: a USDA Community Food Projects grant will be providing \$30,750 over three years and the New Mexico Department of Agriculture (NMDA) is contributing \$30,000 to this project this year. In addition, USDA's Federal State Marketing and Improvement Program awarded NMDA \$27,000 to further develop the program into next year.

Labor

Collaboration got this program going. A group of folks, including Lynn Walters, Craig Mapel, and Judi Jaquez, worked with the support of members of the Student Nutrition Advisory Council, including Registered Dietician and former NET Coordinator Blanche Harrison, to organize this project. Betsy Cull was hired as the Farms to Schools Coordinator, a newly created school district position. School food

service staff prepare the fruits and vegetables for the salad bars.

Farmers/Crops

Organizers worked with the NM Department of Agriculture and the state Farmers' Marketing Association to locate farmers.

Approximately forty farmers sell to the school district, primarily through a farmers' coop, during the fall and spring months. Farmers see a tremendous potential to sell more crops if they can extend their season, and they are working to develop hothouse techniques to do just that. The crops that the children see seasonally include salad greens, sunflower sprouts, apples, pears, watermelons, tomatoes, corn, cucumbers, peppers, squash, potatoes, onions, carrots, broccoli, and radishes.

Product Delivery

The school district is working with the New Mexico Farmers' Market Association to coordinate deliveries through a cooperative distribution system. Deliveries are made either directly to the school sites or to the central warehouse.

Price

There are price barriers that are not easily overcome in New Mexico and are quite likely the greatest hurdles facing the pilot project. New Mexico procurement law requires most state agencies (including school districts) to go out to bid on virtually any item, including produce, that will be over \$10,000. In addition, to insure that the public dollar is being wisely spent, the agency requesting the bid must accept the lowest bid submitted. No real weight is assigned to what in reality is a higher quality, fresher, locally grown product.

This problem is further complicated by the size of the average farm (particularly those in north central New Mexico), which tends to be around 10 to 15 acres. It is difficult to compete with larger, out of state producers, submitting bids on the same type of produce.

The pilot program with the three Santa Fe schools selected by the coordinators has been able to circumvent these problems to a great extent. The coordinators designed bid requests to specify the freshness of the product, i.e. picked and delivered within 2 days, and by using monies from grants to ensure that no state monies were involved in the project to purchase food.

School Food Service Support

School food service personnel have been overwhelmingly supportive, as has been the District Administration. They were brought into this program fairly early in its conception, and were active in helping to design the program.

Kitchen Facilities

The three schools participating in the program had the equipment and facilities necessary to prepare and store the product. The high school kitchen had just gone through a renovation and was well equipped for a salad bar.

Sustainability

When this program started, all of the collaborators knew it would be difficult to sustain in its present form. The organizers have been working at a state and national level to pass legislation that would allow schools to give preference to local growers and to make it easier for area farmers to participate in the program. There is consensus among the collaborators that by working closely with

District purchasing personnel to create very specific purchasing requests that local farmers will have a greater opportunity to participate in the program.

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Florida

Movers and Shakers

In 1995, a group of farmers formed the New North Florida Marketing Cooperative. The goal of the cooperative was to provide marketing services to the participating farmers, and provide training and education in marketing options such as farmers' markets, roadside stands, and selling to local school districts. The goal is to increase the amount of product being sold, thereby increasing the farmers' incomes.

Description

The New North Florida Cooperative began by selling farm fresh produce to 13 schools in Gadsden county, Florida. In six years, the marketing efforts have increased so that the Cooperative now sells to 15 school districts in Florida, Georgia and Alabama. Through these districts, they are serving 300,000 students!

The farmers focus on three to four main items on a seasonal basis and sell to schools year-round. The items are incorporated into menu planning, generally as a side dish or with fresh fruit for dessert. The Cooperative has developed a good reputation by providing high-quality produce, prompt deliveries, fair prices and courteous professionalism. They refer to this as "relationship marketing." The positive word-of-mouth has been very effective in opening the door in other school districts.

Other Project Components

As part of its marketing and promotion, the Cooperative has developed posters showing the life cycle of a crop – from planting to harvesting. These posters are displayed in school cafeterias.

Funding

Approximately 90% of the funding for the Cooperative's marketing efforts come from the sales of their members and participants. These sales come from a variety of direct marketing alternatives, including farmers' markets, roadside stands, and through their sales to schools. When the initial farm to school program was ready to launch, the Cooperative did receive a \$4,000 grant from the USDA Agriculture Marketing Service. They also received a \$3,000 loan from the West Florida Resource Conservation and Development Council (WFRCDC). Most of the grant money received by the Cooperative has been used for infrastructure and equipment purchase, such as refrigerated trucks and cool and cold storage facilities.

Labor

Most of the labor for preparing the products as well as growing them comes from the Cooperative members and participants. During particularly busy times, day labor is also utilized. Since the farmers have the ability to wash, chop and bag the produce, there is no additional labor on the part of the school food service.

Farmers and Crops

The Cooperative provides marketing services and opportunities for over 100 members and participants in Florida, Georgia and Alabama. Their primary crops are collards, field peas, muscadine grapes and a few turnip greens.

Product Delivery

Deliveries are made 2 to 3 days per week depending on school menus. While much of the produce is delivered by the Cooperative, they do work with produce vendors as well.

The produce that is delivered is packaged and has a label with a logo and a nutritional analysis. The Florida A & M University provided some technical assistance to develop the label.

A delivery trailer was purchased by the Cooperative, and a cooling system from a recreational camper was installed to keep the produce at a relatively low temperature while in transit. Styrofoam insulation was also installed to protect the produce from the outside heat. The logo is printed on the side of the trailer along with the name of the Cooperative and the phrase, “The Pinnacle of Quality.”

Price

The Cooperative has developed a niche market as there is little competition in providing fresh, washed, chopped, bagged, and delivered greens. Consequently, the Cooperative is able to negotiate a price that is both fair to the school district and profitable for the growers.

School Food Service

The Cooperative members gained the respect of the school food purchasers by initially *donating a sample of their product – 3,000 pounds of greens*. The greens and fruits have been met with an enthusiastic reaction from children, which has been a big factor in administrative acceptance of the product. All members of the Cooperative go out of their way to be helpful and courteous when delivering the product, and they unload the boxes and stack them neatly in cold storage facilities. After each delivery, the cafeteria manager is notified that the order was

delivered. The Cooperative demonstrates courtesy, provides convenience, and protects the high quality of its products by taking this extra step.

Kitchen Facilities

Since schools are not processing the product, facilities become more of an issue for the Cooperative members, who must have storage, refrigeration, and a covered area for washing, cutting, and bagging equipment. Originally, all of the washing was done in large steel tubs, and chopping was done by hand. There was no refrigeration system and therefore no storage capacity. As a result, harvesting and processing had to be done in one day – one very long day. To continue in business, the Cooperative purchased a packing/processing shed, a cutting/chopping machine, wash sinks, and a refrigeration and storage system. Funds for purchasing equipment came from grant funding and bank loans.

Sustainability

The New North Florida Cooperative has been sustainable since it began, as 90% of its funding comes from direct marketing sales. The few loans and grants they have received have helped it to build infrastructure with equipment purchases.

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Iowa

Movers and Shakers

The three major organizers of the Iowa Farm to School project are Merl Steines and Michael Nash, farmers with the GROWN Locally cooperative, and Joan Lubke, the Food Service Director at the Decorah Community School District in Northeast Iowa. She is also a Dietary Manager. Ms. Lubke and her husband are farmers, producing organic soybeans, corn, oats, and just starting to raise organic cattle.

Ms. Lubke, Mr. Steines and Mr. Nash have known each other for several years, but became better acquainted at a Farm to School forum in Ames, sponsored by USDA and organized by the Practical Farmers of Iowa.

Project Description

Ms. Lubke uses locally grown products for a salad bar and as a la carte items. She works with four schools; two elementary, one middle school and one high school, and the farm-fresh items are particularly popular with students in the middle school and high school.

Other Components

Horticulture classes are offered through the local Future Farmers of America (FFA), and information about agriculture, farming and nutrition are provided as well in classes focusing on the environment and culinary arts. GROWN Locally is also preparing printed materials and will organize farm tours in the spring.

Funding

Ms. Lubke has not received special funding to buy directly from the GROWN Locally cooperative. With additional funding, she would be able to purchase a greater amount of local products.

Labor

The cooperative provides much of the produce already washed to help reduce labor costs. However, some food preparation is needed to cut and chop the produce. The price of labor is the prohibiting factor in expanding this program. GROWN Locally is planning to purchase processing equipment to help reduce these costs for the school district.

Farmers/Crops

There are 11 members in the GROWN Locally cooperative, and they coordinate both the production of the crops as well as the distribution to schools and other institutions. One invoice is presented from the cooperative to the school, so that Ms. Lubke avoids paying each individual farmer – that is done by GROWN Locally. The crops that are the most popular with the students are apples, cucumbers, lettuces, carrots, broccoli and cauliflower.

Product Delivery

Deliveries are made to the school by the cooperative one day per week. With the exception of the apples, this is the first year that GROWN Locally has sold to the school district. Products were purchased in the fall, and it is hoped by both the cooperative and the school district that products will be purchased again in the spring.

Price

The members of the cooperative check wholesale prices for their products, and set their prices competitively with these standards. At this time, 20% of the money received from the sales goes back into running the cooperative.

Even with prices competitive with major distributors, the cost is still somewhat high for the school district. These prices are to a degree offset by the use of commodity items. Ms. Lubke acknowledges that price is an issue, but she is willing to pay for a quality product in order to provide great tasting meals for the children.

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School Food Service Support

As the school food service staff was instrumental in organizing farm sales to schools, they are very supportive of the project. The farmers in GROWN Locally have done some marketing around their direct sales, and it has generated good public relations for the school. There is also good support from school board members.

Kitchen Facilities

The kitchen facilities are up-to-date with an adequate amount of space for food preparation and storage. GROWN locally is planning to build a small processing center to provide their products in forms more accessible to school food service personnel and to extend the times products are available.

Sustainability

Since this project did not require additional funding, it is sustainable. However, labor costs limit any possible expansion. With additional funding for the labor involved in food preparation, the farm to school project would be able to grow beyond its present operation.

Kentucky

How it Started

Official introduction occurred in May 2000 through cooperative efforts of the USDA, the Kentucky Department of Ag., University of Kentucky Extension and the Kentucky Department of Education. Some school districts in Kentucky had noted the North Carolina model and had been purchasing produce through the DOD fresh program and from local cooperatives. In the first year the program was piloted in regions 4 and 8. Schools were encouraged to request product grown in Kentucky, if prices were comparable. The program went statewide this year. Farm to School in Kentucky now has a full time coordinator who handles communications with farmers and schools funded by the State Department of Agriculture.

Farm to School Project and Components

Clark County is Kentucky's model program for integrating Farm to School with nutrition and health education. There they are developing and piloting the Clover CAT (Cooking, Activity, and Time to be well) curriculum. This curriculum includes nutrition, time management, exercise and self-esteem. The curriculum is being piloted in the 5th, 7th, and 9th grades with introductory, intermediate and advanced levels. In some areas the YMCA offers a three-month scholarship to obese children who attend these classes. If the children exercise at the YMCA 30 times in three months they are offered another three-month membership free of charge. Intergenerational gardens are being piloted but not always in conjunction with the farm to school program.

The farm to school coordinator plans to develop additional components (ag education, & nutrition education) in the future.

Funding

The farm to school program is incorporated into the jobs of nearly all those involved. The program is broadly supported by the State of Kentucky. No additional funding has been required.

Farmers/Crops

The Kentucky Department of Agriculture facilitates communication between farmers and schools. They promote products grown in Kentucky such as seedless watermelons, sweet potatoes, broccoli and seasonal decorative products. Local and Kentucky grown cannot always provide quantities needed by school districts. In these cases commodities and out-of-state foods are used. Farm cooperatives comprise the majority of farms involved in the program. Few independent farms participate. There is some question as to how beneficial this program is to new, small-scale, or nontraditional farms.

School food service commented that farmers have not approached schools independently. If they did, they might be well received. Additional product is needed for summer feeding program and school food service might be willing to purchase direct if farmers made the effort. DOD provides purchasing expertise and some contact with growers. DOD helps set prices, works with growers and seeks out small-scale growers.

Delivery

School Districts place their orders in May each year. Contracted produce distributors ship their

produce to larger distribution sites, five located in Kentucky, one in Ohio and one in Tennessee. Product is shipped from these sites to schools. Kentucky Department of Ag. inspects and approves distributors prior to their involvement with farm to school

In districts served by a central kitchen cafeteria managers at individual schools can order from their local distributor to supplement what is provided by the central kitchen. The central kitchen places a request once a month for bid. Bids are published and individual schools may order from that list. Schools are encouraged to choose lowest bid first, Kentucky grown second. Produce is delivered once a week.

Price

Farm-gate price is negotiated by Kentucky Dept. of Ag and DOD. A 5.6% surcharge is added to farm gate price and this price is offered to schools. Price for Kentucky grown has not been an issue with product purchased through State farm to school program but price for locally grown can be an issue when purchasing from local distributors. Commodities and low prices take precedence over locally grown.

School Food Service Support

School food service was supportive from the beginning. At a conference in May 2000 they shared the barriers they had confronted and overcome as well as barriers that persist. For the last year and a half Jefferson County has prepared food in the central kitchen and delivered to schools in refrigerated trucks owned and operated by Food Service. Menus are developed for periods of 6 months. Seasonality impacts price but is not necessarily a consideration in menu development.

A USDA representative provides regular training to food service in handling fresh product and some nutrition education.

Kitchen Facilities

Jefferson County has a model central kitchen that can process huge quantities of food with little additional staffing. Food for school lunches is prepared at this site and shipped to individual schools. Other schools have some processing capability but prefer pre-cut, prepackaged product. No additional labor has been necessary.

Sustainability

This project has a great deal of State support. Nearly all aspects of the program are incorporated into the jobs of those involved. Elementary and middle schools do not allow students to leave campus during school hours. A la Carte items, which are part of school menu, are sold during lunch, but no competitive foods are sold on campus. Although high schools have soft drink contracts, the machines cannot be turned on until an hour after last lunch period. Under these conditions the program is sustainable.

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Pennsylvania

Movers and Shakers

The initiative for the Farm to School project of the Nutritional Development Services of the Archdiocese of Philadelphia/Catholic Social Services came from its director, Patrick Temple-West. He was a board member of the Farmers' Market Trust (now called the Food Trust), an organization interested in creating new linkages for farmers in the city. A representative from Red Tomato, a Massachusetts based nonprofit brokerage operation that helps family farmers find markets, approached Nutritional Development Services to see if there were opportunities for farmers in the Archdiocese's many school feeding programs. Joan Reitz, the Purchasing Manager at Nutritional Development Services, agreed to try this new approach. She admits that she was skeptical at first that the farmer would be able to provide consistent quality, consistent sizes *and* meet competitive price requirements. She has been pleasantly surprised by the outcome of the partnership, however, and plans to continue as long as her standards for quality and price are met.

Farm to School Project and Components

The Archdiocese serves about 18,000 meals per day, including breakfast and lunch, at 150 Catholic and charter schools in the Philadelphia area. During the summer, that number grows to 36,000 meals as Nutritional Development Services also administers many summer feeding programs at schools, churches, and community centers.

In the Farm to School project, NDS has agreed to purchase seasonal fruits – primarily apples, but also pears, peaches, and nectarines – from a large local grower, Beekman Orchards. The farm is located in Boyertown, Pennsylvania, about 45 minutes from Philadelphia.

Funding

The cost of the produce was the single biggest issue in setting up the project. Fortunately, Beekman Farms has been able to provide fruit at a competitive market rate without outside funding for the program.

Labor

The partnership with Beekman Orchards has fit into the conventional purchasing and provision system and has not required additional labor.

Farmers/Crops

At this point, only one farmer sells directly to the Archdiocese. Nutritional Development Services is able to design its menus to meet the farmer's seasonal availability. So NDS offers peaches and nectarines in late summer with apples becoming available later in the fall.

Product Delivery

The farmer, Calvin Beekman, delivers the fruit directly to the warehouse, just like any other supplier.

School Food Service Support

This project originated with the Director of Nutritional Development Services. The ongoing concern of NDS has been ensuring that the quality and price of the farm products meet their overall goals.

Kitchen Facilities

This project required no investment in infrastructure.

Sustainability

“The fruits from Beekman Orchards are an excellent product,” says Joan Reitz, the Purchasing Manager, “and as long as the prices are competitive, this program will continue.”

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California, Santa Monica-Malibu

Movers and Shakers

The initial impetus for this project came from Bob Gottlieb, a parent at one of the schools in the Santa Monica-Malibu Unified School District (SMMUSD). He approached Rodney Taylor, the School Food Service Director, about implementing a salad bar, and initially received a lukewarm reception. However, Mr. Taylor was open to trying a pilot project as long as Mr. Gottlieb was willing to do most of the organizational work. As a university professor, Mr. Gottlieb was able to incorporate students into the project, as well as write grant proposals to hire full-time staff.

Project Description

The Farm to School Project encompasses all of the 15 schools in the SMMUSD district, including elementary, junior high and high schools. Each school has a Farmers' Market Salad Bar which features produce that consists entirely of farm products that are purchased at local farmers' markets. The salad bar also contains protein, grain, and dairy products. Because of the year-round growing season, and year-round farmers' markets, the project is able to always include regionally grown produce. While the project began in one school, within a four year period the Farmers' Market Salad Bar was instituted on a district wide basis. The children have the daily choice of the salad bar or the hot meal.

Other Components

Each of the schools in the district also has a school garden that is maintained by teachers or parent volunteers. A child nutritionist was hired on a temporary basis to teach nutrition

education, including a class on salad bar etiquette and an introduction of the items found at the salad bar. A cooking cart is also used for classroom demonstrations.

Another component of the project is field trips to both farms and the farmers' markets. Teachers sign up their classes for farm field trips and the Salad Bar Coordinator arranges tours of the farmers' markets. The latter includes a talk by the Market Manager about the different products at the market accompanied by hands-on experience with the products, and of course, an opportunity to sample them.

Funding

During the first year, funding was provided by the California Endowment to UCLA/Occidental College through a grant directed by Mr. Gottlieb. In the next year, the district took on the staffing of the project and obtained funding from a Department of Health Services Nutrition Network grant. However, only six schools in the district qualified for this grant, due to the requirement that a specific number of children be eligible for free or reduced meal pricing. At the other schools, the PTA donated \$5,000 - for each school - to get the program up and going. The Santa Monica Farmers' Market also donates \$10,000 per year to the Farm to School project. Funds from *ala carte* sales also help to support the Farmers' Market Salad Bar.

Labor

In the first year, labor was provided primarily by UCLA/Occidental College staff and parent volunteers. However, the school labor unions do not allow parent volunteer labor, and eventually, a part-time person was hired at

each school to help with the salad bar preparation, serving and clean-up. There is also a Salad Bar Coordinator who oversees the entire program.

Farmers/Crops

There are two tremendously successful year-round farmers' markets within a mile of the SMMUSD central office. Twice a week, on Wednesdays and Saturdays, the Salad Bar Coordinator visits the markets to purchase the produce. Some of the products purchased seasonally include: strawberries, apples, melons, cherries, lettuce, carrots, celery, tomatoes, citrus, raisins, peppers, broccoli, cauliflower, potatoes, and peaches. Over the school year, about 20 farmers will provide crops for the salad bar, and the district will spend a total of approximately \$100,000 on produce from the farmers' market.

Product Delivery

The SMMUSD has its own truck to transport the produce. The district purchased the truck prior to the implementation of the Farmers' Market Salad Bar. The produce is brought directly from the farmers' market to the central kitchen where one driver delivers produce to the Santa Monica schools and another driver transports the produce to the schools in Malibu. This is done twice weekly.

Price

As the farmers are already making the trip to the farmers' market, and do not have additional delivery costs to the schools, they are able to sell at wholesale instead of retail prices. In the beginning of the project, some farmers sold below wholesale because they believed in the idea of kids eating great produce. With the Farmers' Market Salad Bar now in all 15 schools, the prices are generally comparable to wholesale.

School Food Service Support

Initially, support from school food service folks was slow in coming. The real change occurred when the staff saw children choosing the salad bar for lunch, and eating what was on their plate! There is now overwhelming support for the project, and Rodney Taylor has on his business card, "Home of the Farmers' Market Salad Bar."

Kitchen Facilities

Each of the schools has their own facilities for food preparation. The actual salad bars were purchased before the farmers' market component was added.

Sustainability

After four years in operation, the Farmers' Market Salad Bar is able to operate without grant funding. However, some of the other project components, such as the nutrition education, can only be done if additional funding is obtained. The SMMUSD has found that costs spread out over 15 schools make it a much more viable program than when it operated in only 2 or 3 locations.

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California, Healdsburg

Movers and Shakers

Nancy May, the School Food Service Supervisor, is the main organizer behind this Farm to School project. She came to Healdsburg Junior High School at a time when the cafeteria was being renovated, and decided to change the emphasis from ordering *a la carte* items from windows to eating a healthy, appealing meal using a cafeteria line,

Project Description

Ms. May has instituted an eye-catching salad bar, using farm products wherever possible. This salad bar operates two days a week at one middle school and the high school. She has opened three old school kitchens – including one at an elementary school - and is serving up virtually home-cooked lunches every day. The *a la carte* items, such as burritos and tamales, are nutritious and freshly made, and have helped boost *a la carte* sales.

Other Components

School gardens have been organized at each school, with the help of community donations. One garden fence, including the labor, was donated by a local gardening group. Materials for raised beds were donated by a local home and garden business. Ms. May aggressively markets the farm to school project, by actions such as serving school lunches at school board meetings. She has also hosted the state Superintendent of Schools to visit the school garden.

Students and parents also help with the menu planning and Ms. May holds occasional product tastings to help determine students' preferences.

Funding

Ms. May has received \$30,000 from a Shaping Health as Partners in Education grant (SHAPE) that has been used to help develop nutrition education, teacher training, and to purchase equipment such as the salad bars and a portable cooking cart for classrooms. She received a second SHAPE grant for \$50,000 that was used for developing the school garden, for links between the garden and farm to school project, and for an agriculture curriculum.

Labor

The bulk of the organizing work has been done by Ms. May. She has incorporated student workers in the cafeteria to help with food preparation and food serving. Students over 13 years old can work up to 6 hours per week.

Farmers/Crops

The district buys from three local farmers who were located by Nancy May at the local farmers' market and through word-of-mouth. The crops they provide, on a seasonal basis, include: tomatoes, cucumbers, apples, pears, herbs, peppers, onions, and lettuces. Ms. May buys organic produce whenever possible.

Product Delivery

The farmers deliver directly to the district on Monday mornings for the salad bar that operates twice weekly at both the junior high and high school.

Price

The farmers charge a fair price that is generally the same as the wholesale price.

School Food Service Support

This program was organized by the school food service staff. However, staff is working to

garner further administrative support to expand the existing program.

Kitchen Facilities

When Ms. May came to the district three years ago, she began reopening three old kitchens so that meals could be freshly prepared instead of reheating prepackaged frozen meals. Both of the kitchens at the elementary schools have been slowly renovated within the last three years. The high school kitchen is also being renovated. Despite these improvements, more space is needed for food preparation and storage.

Sustainability

While this program is sustainable, additional funding would help to expand and improve what currently exists. Funding would be used for storage and refrigeration facilities, to pay for more labor-intensive meal preparation, for a garden/farm to school coordinator, or additional serving tables and utensils.

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New York

Movers and Shakers

Progress in making farm-school connections in New York has come through both university and community efforts. *The New York State School Food Service Association-NY Farms! Farm to School Task Force*, a state-wide coalition of school food service directors, farmers, health professionals and others interested in increasing use of local foods in schools, has been instrumental in gaining support and involvement among food service directors. This group surveyed directors about using local produce, forged links between farms and schools, and was key in developing state farm to school policy. These activities were critical as Jennifer Wilkins developed the New York portion of a successful USDA IFAFS grant application and established the Cornell Farm to School Program. Through this program a network of stakeholders identified strategies to better connect farms and schools and implemented two pilot projects, with Tracy Farrell as project manager.

Description

In 2001, food service directors Debbie Richardson in Hannibal, NY and Ray Denniston in Johnson City, NY applied and were selected to have their school districts serve as farm to school pilot sites. Richardson and Denniston both expressed strong interest in using more locally grown food in school meals.

Project pilot site agreements called for directors to purchase more NY products as available, try new recipes using NY products, and track key indicators for evaluation. The directors continued to order from their established suppliers, specifying NY grown

food as available. In Johnson City, Denniston also purchased some fruits and vegetables directly from a local farmer. Directors agreed to serve NY-grown apples, onions, cabbage, and potatoes at least once per month year-round, and broccoli, lettuce, green peppers, tomatoes, pears, and melon as available in the fall. Cornell provided new recipes for some of these foods. Directors also agreed to serve carrots and kidney or black beans from NY or elsewhere at least once per month. During the second year, directors agreed to feature a “NY Food of the Month” on menus and to share Cornell-produced fliers with families and teachers.

The value of local purchases from September, 2001 through March, 2003 was \$2735.50 for Johnson City and \$7027.95 for Hannibal. In both districts, local produce purchases for September 2003 were more than double those for September 2002.

The days per month that locally grown products were offered varied by item, school and month. NY cabbage, onions, and apples were served between 2 and 16 times each month. NY potatoes were included at least one day each month for most months. Carrots, although served frequently, were not from NY. During the fall, many local foods beyond those specified in project agreements were also served. Recipes were tested and adopted for bean chili, coleslaw, and potatoes.

Other Project Components

- Web resources (www.cce.cornell.edu/farmtoschool) were developed to foster communication among schools, farms, and community groups.

- One school in Johnson City began a school garden project.
- During the project year both directors worked with others in their areas on farm to school efforts. Johnson City was involved with a newly established Broome-Tioga Farm to School (B/T-FTS) Workgroup comprised of ten foodservice directors, four Cornell Cooperative Extension educators and five farmers from Broome and Tioga Counties. This group coordinated plans to celebrate NY Harvest for NY Kids Week, Sept. 28-October 6. During this special week, designated by the state Farm to School law, children, schools and families are encouraged to purchase, consume and learn about local foods and agriculture. In Broome and Tioga Counties, 11 school districts served the same meal featuring NY foods on Oct. 2.
- The Johnson City School district also held a school assembly where State and local officials, farmers and Cornell University representatives were featured guests. During this event the NYS Commissioner of Agriculture publicized the new NYS Assembly Farm to School initiative that was signed into law in early 2002.
- Members of the B/T-FTS Workgroup are working with local beef farmers and testing beef in schools to determine whether it is acceptable.
- Farrell developed *Farm to School News*, a newsletter produced quarterly for members of the B/T-FTS Workgroup to share with families at their schools.
- The B/T-FTS Workgroup also conducted a survey to find out what programs and activities schools offer and what they might be interested in offering to help children learn about food

and agriculture. The survey, mailed to 76 school principals in Broome and Tioga Counties, and returned by 23 of them, indicated that many principals would like to sponsor farm to school activities, especially during NY Harvest Week.

- In Hannibal, the food service director helped form a Hannibal Farm to School (H-FTS) Workgroup with representatives from the Oswego County Farm Bureau, Cornell Cooperative Extension of Oswego County, and NY Farms! The group celebrated NY Harvest for NY Kids Week, with an exciting, interactive farm to school Harvest Fair at Kenney Elementary School on October 2. During the four hour event in the school gym, over 570 3-6 graders and their teachers participated in activities that showcased the wide variety of food produced in Oswego County. Children voted on a favorite variety of apple, “milked” Clover, a simulated cow, tasted and explored several kinds of squash, shucked corn, and more!
- Members of the H-FTS Workgroup and others are working with a New York potato farmer and processor to test fresh processed potato products in schools.

Funding

The IFAFS grant has funded a part-time Cornell Farm to School Project Manager, Tracy Farrell.

Labor

Most ordering of local food has fit within the conventional purchasing and provision system and has not required outside labor. However, when whole foods, especially broccoli and cauliflower, from local sources required additional labor to wash and chop, food service employees reported that the extra effort was

worth it for the superior quality of the local vegetables.

The Cornell Project Manager has provided communications (through brochures, newsletters, and website) and facilitated meetings among food service directors and farmers.

Many other individuals and agencies have contributed to the success of the projects. Cornell Cooperative Extension of Oswego, Broome, and Tioga Counties and the Oswego County Farm Bureau have provided personnel, supplies, and food for farm to school workgroups and for the NY Harvest Week events. The NYS Departments of Agriculture and Markets, Education, and Health have been involved in various aspects of the projects.

Farmers and Crops

One farmer, Frank Wiles, has sold apples, pears, broccoli, cauliflower, tomatoes, green peppers, and cucumbers directly to the Johnson City School District. Otherwise, districts have ordered New York grown produce through regular suppliers. In several cases, C's Farms, the supplier for Hannibal School District, has made special purchases of local products, including carrots, plums, and potatoes, at the request of the food service director. Directors in both districts have adjusted their menus to take advantage of seasonal produce, including pears and melons.

Product Delivery

Frank Wiles delivered produce directly to Johnson City's central kitchen every week during the fall. Wiles also delivers produce to several other school districts in the area. Regular suppliers also made weekly deliveries to the districts.

Price

In season, the price of most produce from NYS has been comparable to that of other produce.

School Food Service Support

School food service directors have been key players in these pilot projects. Through their leadership, other food service directors have also been involved in ordering local food, celebrating NY Harvest for NY Kids Week, and testing the feasibility of using local beef and processed potato products.

Sustainability

Because the food service directors have taken leadership for ordering more local foods within their regular budgets, these projects should be sustainable without additional funds.

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SOME BACKGROUND...

School Meals in Historical Perspective

Since its inception in 1946, the National School Lunch Program has provided cash reimbursement and supplemental foods to schools complying with federal regulations. Currently, more than 97,700 public and private schools and residential child care institutions participate, and over 27 million children eat school lunch each day. Free and reduced price meals are provided for children whose families meet specific income guidelines (less than 130% of the federal poverty line for free meals, and between 130 and 185% of the poverty line for reduced price meals). At the federal level, the National School Lunch Program (NSLP) is administered by the United States Department of Agriculture's Food and Nutrition Service (FNS). At the state level, the program is usually administered by the state Department of Education through agreements with local school districts.

Food was served in schools for nearly 100 years before the inception of the NSLP in 1946. The public began to become aware of problems associated with childhood malnutrition in the early 1900s. During the Great Depression, the government began providing federal assistance for agriculture, employment, economic recovery, and school lunches. In the mid-1930s, the Works Progress Administration provided women in particularly hard-hit communities with employment at local schools, making and serving lunch to school children. States began to oversee school lunch, and local programs were becoming more organized.

By 1941, 23,000 schools were serving school lunch to 2 million children, employing 64,000 people. The program grew during the early 1940s, with food for school lunch programs often coming directly from local farms. Canneries were established in schools to prevent fresh foods from spoiling. Feeding school children had become a community effort. By 1943, 5 million children were being fed, in part with funds and surplus commodities from the federal government. However, during WWII, federal assistance and the quantity of surplus foods available to schools decreased. Women who had previously worked in school lunch programs for the Works Progress Administration began to fill jobs related to the war effort.

“as a measure of national security to safeguard the health and well-being of the Nation’s children and to encourage the domestic consumption of nutritious agricultural commodities and other food...”

– National School Lunch Act, 1946

The School Lunch Program recovered in 1946, when Harry Truman signed the National School Lunch Act, providing \$231 million to serve lunches to 4.5 million children. At that time, many young men who had volunteered for military service were malnourished, the nation needed an outlet for surplus agricultural commodities, and children needed to be well-fed in order to participate more fully in learning at school. So, “as a measure of national security to safeguard the health and well-being of the Nation’s children and to

encourage the domestic consumption of nutritious agricultural commodities and other food..." President Truman signed the National School Lunch Act.

In the 1960s there was renewed awareness of the problems associated with poverty and hunger in the U.S. In 1966, The Child Nutrition Act led to a pilot of the School Breakfast Program, which became permanent in 1975. In 1968, the Summer Food Service Program and the Child Care Food Service Program were piloted. Both programs became permanent in 1977. In 1989, the Child Care Food Program became the Child and Adult Care Food Program and After School Snacks became reimbursable as a result of the Child Nutrition Reauthorization Act of 1998. Child nutrition programs have grown over the past several decades. Currently, 7.7 million children eat school breakfast; 2.6 million children participate in the Child and Adult Care Food Program, and 2.1 million children participate in the Summer Food Service Program.

The Healthy Meals for Healthy Americans Act of 1994 and the School Meals Initiative for Healthy Children (SMI) in 1995 required some changes to the existing school meals and snack programs. As a result, school meals and snacks must meet the Dietary Guidelines for Americans, which recommend that no more than 30% of an individual's Calories should come from fat, and no more than 10% from saturated fat. School meals must reduce the level of cholesterol, moderate the use of salt and sodium, and include more dietary fiber as compared to meals served prior to 1995.

School lunches must also provide one-third of the Recommended Dietary Allowances for protein, Vitamin A, Vitamin C, iron, calcium, and Calories. School breakfasts must provide one-fourth of these allowances.

Team nutrition was implemented in 1995 to help schools meet the new nutrition standards. Team Nutrition's emphasis is to provide training and technical assistance for food service staff and to develop nutrition education materials for teachers and students.

Current Challenges for School Food Service Directors

Managing school food service finances and containing costs are two major concerns for food service directors. The food service program is often expected to be self-supporting, or even be a source of revenue for the general school budget.

Labor

The general shortage of service employees and the high turnover of low-paid personnel are challenges that school food service directors must face. Many school districts have turned to central kitchen or satellite operations to reduce labor needs and therefore reduce costs. In these situations, food is prepared in one school's kitchen or other off-site location, and then transported to schools for heating and serving. The use of convenience and prepackaged foods also reduces the need for labor in food preparation.

Costs

Controlling costs and increasing revenue has become increasingly important for school food services that are expected to either be fiscally self-sufficient or to generate revenue for the school's general budget. The combination of funds from the sales of meals, USDA reimbursements for free, reduced, and full price meals served, and commodity allowances based on meals served is not always adequate for covering all food service related costs. School districts are using various additional methods to reduce costs and increase revenue. Examples include: selling items *a la carte*, offering competitive foods, outsourcing food

service management, and signing contracts with food manufacturers and fast food companies. Contracts with commercial entities have implications for the school food service whether or not the school food service director is involved in such decisions. The reasons for outsourcing food service management often include labor shortages, failure to meet the bottom line, out of date kitchen equipment, and aggressive sales pitches from food service management companies.

Competitive Foods

Competitive foods are those sold to students before or during the school meal in competition with the National School Lunch Program or the School Breakfast Program. The USDA defines two kinds of competitive foods: 1) *foods of minimal nutritional value* and 2) *all other foods offered for individual sale*. Current program regulations prohibit the sale of *foods of minimal nutritional value* in food service areas during school meal periods. However, these foods can be sold outside the food service area at any time. *All other foods for individual sale*, sometimes referred to as *a la carte*, can be sold in the food service area during the school meal periods. These foods must provide at least 5% of the RDA for protein, Vitamin A, Vitamin C, niacin, riboflavin, thiamin, calcium, or iron.

A la carte items are sold separately from the complete school meal. *A la carte* items are limited in elementary schools, but usually available in high schools. Some schools have taken desserts off the menu to sell them *a la carte*, as a cost savings measure. Many schools are increasing *a la carte* sales to increase revenue. Sandwiches, juices, water, desserts, and pizzas are examples of items that are sold *a la carte*. Vending is an option where there are labor shortages. While many foods typically

found in vending machines are of minimal nutritional value (candy, soft drinks, and chips), vending machines can also offer fresh fruits, yogurts, salads, sandwiches, and fruit juices.

When other foods compete with school meals, there can be several unintended consequences.

1. Compared to items in the school meal, competitive foods are typically lower in nutrients and higher in fat, added sugars, and calories. When these foods replace more nutritious foods, the overall quality of the diet decreases, putting children at risk for long term health problems.
2. Offering competitive foods can stigmatize participation in school meals. Purchasing *a la carte* items is often more expensive, and therefore out of reach for children who depend on free and reduced price meals.
3. Schools that do not allow competitive foods have higher school meals participation rates. Therefore, offering competitive foods may affect the viability of school meal programs.

Although *a la carte* sales can provide additional revenue, if participation in the school meal program declines, there is decreased cash and commodity support from the USDA. With less USDA support, there is less incentive to maintain high quality school meals that meet nutritional guidelines for children who otherwise would not be able afford to eat. Overall, competitive foods convey a mixed message when children are taught about the importance of a good nutrition and a balanced diet in the classroom, but are surrounded by foods of low nutritional value in vending machines and the school cafeteria.

Pouring Rights Contracts

A Pouring Rights contract is an agreement between a beverage distributor and school that allows the distributor to be the only company selling beverages at a given location. School administrators usually negotiate such contracts without input from the school food service director. By signing the contract, the school cannot endorse competitor products through the posting of logos or advertising. The school receives a commission on the sale of beverages through vending machines in the school or on school grounds. Often a beverage distributor also offers the school needed athletic equipment or other donations as inducements to enter into a contract. Depending on the contract, there may be a minimum annual commission that the school will receive, or the school may have a required annual sales quota.

Direct advertising by beverage distributors, sponsored educational materials, and sales incentives can have negative effects on the school learning environment. Students, teachers, parents, and nonprofit organizations have questioned the ethics of using publicly funded educational institutions as avenues for exclusive marketing and advertising campaigns. Many feel that schools should be commercial free environments, and that no corporation should have exclusive access to impressionable children and adolescents for the purpose of creating brand loyalty. Often the revenue generated for the school by entering into such contracts does not justify the hidden costs of making minimally nutritious and caffeinated soft drinks more accessible to school children. Because school revenue depends on sales, the implication is that school children are encouraged to increase their consumption of empty calories. This result is certainly counter to the goals of school meals

programs and nutrition education. It is difficult for school meals to compete with popular branded and advertised foods, especially when children and adolescents develop a preference for fast food, sugary drinks, and salty snacks.

Space and Time for Eating

When budgets are limited, school boards and administrators often give preference to updating educational equipment, materials, and classrooms over replacing food service and cafeteria equipment. Equipment can become outdated or inadequate for preparing and serving appealing school meals. Seating limitations can result in lunch periods that start earlier or extend into the afternoon. Lunch periods are also shortened to expand the academic portion of the school day.

Extracurricular meetings often occur during lunch, requiring students to eat very quickly, eat only packaged snack foods, or skip meals entirely. Unpalatable meals in combination with the hurried and unsupervised lunch experience can result in excessive plate waste. Reducing plate waste and increasing school meal participation can involve improving the eating environment and the appearance of the school meal, as well as including students in meal planning, minimizing competitive foods, and conducting promotional events such as nutrition fairs or special celebrations.

Dietary Guidance

The United States Department of Agriculture and the United States Department of Health and Human Services cooperatively provide Americans with nutrition information and guidance. The Food Guide Pyramid, which began adorning food packages in 1992, serves as an appropriate visual companion for the latest edition of the Dietary Guidelines for Americans, published in 2000 (see Box: Dietary Guidelines for Americans). The Dietary Guidelines for Americans are seven recommendations for a healthful diet. By following the recommendations, consumers can help lower their risks for developing diet-related chronic diseases such as heart disease, high blood pressure, stroke, certain cancers, and the most common type of diabetes. The Guidelines have been formulated and are updated by experts in the field of nutrition.

The Food Guide Pyramid (see next page) is a useful tool for helping Americans apply the Dietary Guidelines when they make daily food choices. The Food Guide Pyramid illustrates three main principles: variety, moderation, and proportionality. Variety in food choices helps ensure the intake of essential nutrients. Each of the five food groups is important for different reasons. For example, the Bread, Cereal, Rice, and Pasta Group provides carbohydrates, protein and fiber. The Fruit Group and the Vegetable Group provide many vitamins and minerals, and fiber. The Milk, Yogurt, and Cheese Group provides calcium and protein. While the Meat, Poultry, Fish, Dry Beans, Eggs, and Nuts Group provides good protein and minerals, like iron and zinc. For a balanced diet, one should eat servings from each of these food groups everyday.

Dietary Guidelines for Americans (5th Edition, 2000)

AIM FOR FITNESS

- Aim for a healthy weight.
- Be physically active each day.

BUILD A HEALTHY BASE

- Let the pyramid guide your food choices.
- Choose a variety of grains daily, especially whole grains.
- Choose a variety of fruits and vegetables daily.
- Keep food safe to eat.

CHOOSE SENSIBLY

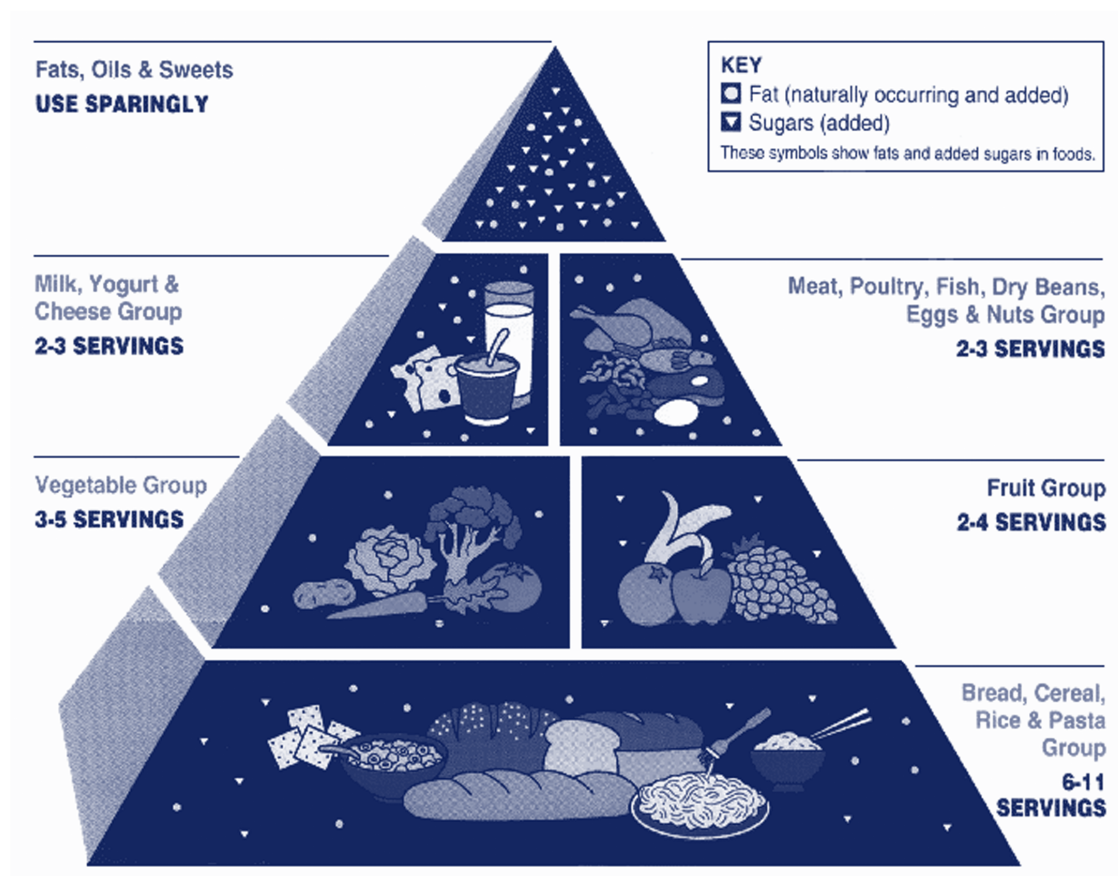
- Choose a diet that is low in saturated fat and cholesterol and moderate in total fat.
- Choose beverages and food to moderate your intake of sugars.
- Choose and prepare foods with less salt.
- If you drink alcoholic beverages, do so in moderation.

Source: U.S. Department of Agriculture U.S. Department of Health and Human Services

The Food Guide Pyramid illustrates moderation by placing fats, oils, and sugars at the very top. Fats and sugars naturally occur in all the food groups, but foods that are very high in added fat and sugar should be used sparingly. We all like to have a treat now and then, but moderation is the key.

Finally, the Food Guide Pyramid illustrates proportion by showing the relative amounts to choose from the various food groups. The Bread, Cereal, Rice, and Pasta Group is at the base of the pyramid. Whole grain foods from this group should be consumed in greater

THE FOOD GUIDE PYRAMID



amounts than foods from other groups (between 6 and 11 servings per day). Vegetables should be the next largest part of the diet (the recommended number of daily servings is between 3 and 5). Fruits are on the same level as vegetables, but in a slightly smaller compartment (consume between 2 and 4 per day). The recommended number of servings for the Milk, Yogurt, and Cheese Group is 2 or 3. One should also consume 2 or 3 servings of meat, poultry, fish, dry beans,

eggs, or nuts. The quantity of food you should eat depends upon your individual needs. But, you should try consuming at least the lowest number of servings indicated for each of the groups.

School Meals & Child and Adolescent Nutrition

Childhood and adolescence are both critical parts of the lifecycle for growth and development. Adequate and balanced nutrition are important for ensuring that growth and development is optimum, as well as for laying the foundation for a lifetime of healthful nutrition behaviors. We establish our food preferences during childhood, and tend to choose foods that are familiar to us. During adolescence we begin to make more of our own decisions about food, prepare food and eat independently, and spend money on the foods we prefer.

Nutrition education during the school years is an important method for developing a nutritionally informed population. Nutrition education can occur in classrooms, clubs, through private sector programs, and media outlets. However, nutrition education is frequently a low priority in the curriculum.

School Meals & Food Security

School meals can make a considerable contribution to nutrition knowledge and the formation of good eating habits. It is during the school meal that nutrition becomes tangible; students learn by observation and experience. By feeding growing bodies and developing minds, school meals also contribute to the teaching and learning that occurs in classrooms. School meals can have positive effects on the cognitive development of children. Studies have shown that participants in the School Breakfast program have higher standardized achievement test scores and fewer

school absences compared to children who qualify for School Breakfast but do not participate. For low-income children, the School Lunch provides between one-third and one-half of their daily nutritional intakes.

While hunger is not as visible in the United States as in many other places in the world, a significant percentage of American households (about 11% in the year 2000) are “food insecure.” Being food insecure means that families are living with uncertainty about whether or not they will be able to acquire adequate food for everyone in the household on a regular basis. About one-third of food insecure households experience food shortages along with the physiological, mental, and emotional consequences of hunger. More than one-third of the nation’s hungry are children. Nearly one in five children is food insecure.

Inadequate food intake hinders a child’s ability to learn. Within the chronically undernourished child, food energy is used first for the critical functioning of organs, second for growth, and last for social interaction and cognitive development. Therefore, children who behave poorly, seem lethargic, apathetic, or unable to concentrate, may in fact be in need of food. The inability to develop at a normal pace puts an already disadvantaged child further behind. For these children, school meals serve an extremely important purpose.

Nutrient Intake among Children and Adolescents

Recent analysis of the Continuing Survey of Food Intake by Individuals (CSFII) suggests that children’s diets are limited in several nutrients including Vitamin E, folate, zinc, calcium, Vitamin A, and magnesium. Teenage

girls are at an especially high risk of having low intakes of folate, calcium, and magnesium. For adolescents, adequate energy, protein, and zinc are needed for normal growth and development. Adequate calcium is essential for bone growth, and iron is needed for increasing muscle mass and blood volume.

Few children (only about two percent) meet the recommendations for servings from different food groups provided by the Food Guide Pyramid. Only 14% consume at least two servings of fruit per day, 17% consume two or more servings of meat or meat substitutes, 20% consume three or more servings of vegetables, 23% consume at least six servings of grains, and 30% consume at least two servings of dairy products. Additionally, most children drink soda on a daily basis, with teenage boys being the heaviest consumers. Added sugars are contributing approximately 20% of total food energy.

Breakfast tends to be the most nutrient dense meal of the day, and is the most likely meal to conform to Dietary Guidelines recommendations for fat, saturated fat, and sodium. Unfortunately, breakfast is also the most likely meal to be skipped by children and adolescents. School Breakfast participation is associated with higher daily intakes of energy, calcium, phosphorus, and Vitamin C.

Overall, participation in the National School Lunch Program is associated with higher daily intakes of energy, Vitamin B6, Vitamin B12, thiamin, riboflavin, calcium, phosphorus, magnesium, and zinc. School Lunch participants also have higher daily intakes of fat, saturated fat and sodium when compared with nonparticipants, but lower intakes of

added sugars. Participants are more likely to consume vegetables, milk or other dairy products, meat and meat substitutes, and less likely to drink soda or fruit drinks.

In contrast, adolescents for whom fast food is the mainstay of the diet may have limited intakes of calcium, riboflavin, Vitamin A, Vitamin C, magnesium, folic acid, and fiber, but high intakes of fat, sodium, and added sugars.

Increasing Prevalence of Overweight

With 61% of U.S. adults now considered overweight (BMI between 25 and 29.9), and 27% obese (BMI \geq 30), it should not be surprising that the prevalence of overweight among children has also increased dramatically in recent decades. Overweight in children and adolescents is defined as a sex and age specific BMI at or above the 95th percentile based on Centers for Disease Control and Prevention (CDC) growth charts. Currently 13% of children ages 6 to 11, and 14% of adolescents ages 12 to 19 are considered overweight. In the past 20 years, overweight in children has nearly doubled and overweight in adolescents has nearly tripled.

Obesity in adults is associated with increased risk of more than a dozen health conditions and chronic diseases including diabetes, heart disease, stroke, cancer, asthma, osteoarthritis, and psychological disorders. Obesity and its many medical complications have created a very costly problem for the U.S. health care system. The direct and indirect costs of obesity in the year 2000 have been estimated at 117 billion, mostly owing to the fact that diabetes, coronary heart disease, and hypertension can be expensive to treat.

Overweight children and adolescents are more likely to become overweight or obese adults. And, though chronic disease is usually associated with later adulthood, diabetes, high cholesterol, hypertension, orthopedic problems, and early maturation occur with increased frequency in overweight youth. As a percentage of all childhood diabetes, Type II cases have quadrupled from 4-16% since 1992. In addition, there are psychosocial consequences related to the stigma of being an overweight child and the resulting discrimination.

According to the Surgeon General's 2001 Call to Action, schools are a key setting for public health strategies to prevent and decrease overweight and obesity. Strategies need to go beyond the traditional approaches of health and physical education and include school policy, the school physical and social environment, and links between schools, families and communities. Action steps provided by the Surgeon General are related to ensuring that school meals meet nutrition standards and that all foods available at school are consistent with Dietary Guidelines recommendations.

School nutrition programs are often inappropriately blamed for current childhood and adolescent nutrition problems, as a multitude of factors have contributed to the increasing rates of overweight children and the prevalence of chronic disease. However, the school nutrition program does have a significant opportunity to positively affect the nutritional fitness of our nation's youth. While children and adolescents are forming life long eating patterns, school lunch and breakfast programs are an opportunity to expose them to nutritious food choices and to teach them about

appropriate portion sizes and balanced meals. At a time when the nation's parents are focused on the nutritional fitness of their children, the school food service director has the opportunity to use that public concern as leverage for seeking additional needed resources in ways that do not undermine what is being taught in health and physical education classes. As the school's food and nutrition professional, the school food service director can provide leadership for integrating more food and nutrition into classroom lessons, and for making the lunch period a valuable learning experience.

Small Farms

While some of us may live near, have grown up on, or have a relative who still works on a farm, *most of us* have very little understanding about agriculture. Only about two percent of Americans are directly involved in food production today. A century ago, about half of Americans were farming. Why are so few of us farming compared to decades past? In general, as farming has become more industrial and technologically sophisticated, farmers can grow more food on fewer acres. By using new technology, fewer farmers are needed to meet our food needs. The farms that remain have become larger because using large machinery and other technological inputs is more economically viable on large farms. Although historical circumstances have encouraged replacing human labor with machines that necessitate larger scale agriculture, the shift to large-scale agriculture has also been encouraged by government policies and the emphasis of agricultural research at land grant universities.

According to *A Time to Act* – a 1998 report by the USDA Commission on Small Farms– government policies and practices have discriminated against small farm operators, and continue to encourage greater concentration of assets and wealth in fewer and larger farms and agribusinesses. The increasing scale of agriculture allows us to enjoy an abundant and relatively inexpensive food supply – Americans spend a smaller proportion of their income on food (about 11%) than do people in any other country. However, the transition to large-scale technologically sophisticated agriculture does have costs that are not accounted for in the price we pay for food. Communities have paid

these costs in the loss of cultural traditions and aesthetic landscapes. Rural economies have suffered as farmers are displaced. The environment is degraded where agrochemicals are overused, and where soil and water are not conserved. Many think that the quality of foods –such as fresh produce, meat, and milk– has declined as mass production, long shelf life, and long distance transportation have taken priority over freshness, flavor, and characteristics that favor food diversity.

The USDA defines small farms as those earning less than \$250,000 in gross annual receipts, which translates to an average net income of \$23,159 per year. Farming expenses absorb over 80% of farmers’ annual gross receipts. Small farms are typically owned and operated by a farmer or farm family who provides much of the labor required. In spite of overall growth in farm size, the USDA estimates that 94% of farms in the U.S. are “small farms.” The Economic Research Service considers 80 percent of farms “limited resource” farms, with gross annual receipts less than \$100,000.

Economic Viability

Several factors threaten the economic viability of farming on a small scale, including depressed prices for agricultural commodities, fluctuations in government crop subsidies, and changes in the food system that have shifted the potential for generating profit to other food system sectors.

Farmers have little control over the prices they receive for their products. The concentration of control and ownership at various levels of the food system means that farmers are operating in a market of many sellers and few buyers. Farmers of commodities such as corn,

soybeans, or wheat are receiving prices that are significantly lower than 20 years ago. In general, farmers have less control over their own economic security than in the past.

Though the vast majority of farms are small, small farms account for less than one third of the total value of U.S. agricultural production. In the last decade, government subsidies that provide income and price stability for the farming sector have declined, though the most recent Farm Bill suggests that they may increase again. The subsidies that are still in place are based on production. Farms already earning more than \$250,000 in annual sales receive about half of all government price supports.

While there is increased economic opportunity in the other parts of the food system, profits in agricultural production have declined. As our food system expands and becomes more complex, much of the value that consumers expect in the foods they buy at the supermarket is added *after the farm*, by food processors, marketers, distributors, and retailers. As a result, the farmers' share of the food dollar has steadily decreased from 37 cents in the 1970s to 20 cents in 1999. During the same time period, the proportion of consumers' incomes spent on food has declined from 14% in the 1970s to about 11% today. In summary, more economic value is being added to food to increase its convenience for consumers, while food has become relatively *less* expensive compared to disposable income. Declining farmer incomes are in effect making up the difference.

According to the USDA Economic Research Service, most farms did not report adequate income to cover expenses in 1998. Many small and limited resource farms depend on income

from off farm jobs to make ends meet. In fact, farming is considered the principal occupation for only about half of all U.S. farmers. In addition, the average age of farm operators was approaching 55 in 1997. Most farmers in the U.S. are nearing retirement. It is difficult for young people to make the investment that starting a farm requires, and passing the farm onto the next generation can be difficult if the farm itself represents the current farmer's sole retirement package.

Loss of Farms and the Farm Crisis in Rural Communities

In the mid 1960s, there were more than 3 million farms in the U.S. Currently there are less than 2 million. While the majority of farms (60%) are still smaller than 180 acres, the average farm has grown to 500 acres, 40% larger than in 1964. The number of large farms has increased, and the number of small farms has decreased. In the last 25 years, more than 300,000 family-owned farms went out of business. In some cases, the loss of farms is the result of economic development or changing land uses. On the edges of growing urban centers, farmland is often sold for alternate uses such as residential or commercial development. In other cases the loss of farms can be the result of economic consolidation in the food production sector of the food system. In either situation, a farm family is no longer able to make a livelihood on that particular parcel of land, and the surrounding community experiences change. The implications of changes in land use are described in the next section.

For rural communities, the foreclosure of thousands of small farms in the last several decades has resulted in what is referred to as the farm crisis. Symptoms of the crisis include

depopulation of rural areas, and aging of the rural and farming population as young people seek work in more promising locations and careers. Businesses that were vital parts of agricultural economy have closed, while unemployment, homelessness, murders, domestic violence, and hate groups have risen in rural areas. Additionally, the feelings of failure and desperation have contributed to the disturbing fact that farmers have a high rate of suicide compared to other groups of workers.

The Value of Small Farms

Small farms provide a variety of benefits for our communities. Small, varied farms create a scenic landscape. The diverse cropping systems used on small farms can contribute to the conservation of biological diversity. Cultural traditions embodied by small farms can help preserve a community's identity. Small farm operators who live on or near their farms are often more concerned about how their actions affect the environmental quality of the community. Farmers who rely on local businesses and services for their needs have a stake in the well being of the community and well being of its citizens. Farming families pass values and skills from generation to generation, which preserves and expands a bank of farming knowledge that is specific to the land and conditions in a specific place. Through farmers' markets, and other direct marketing strategies, consumers can connect with the people who grow their food and the land that sustains them. In many rural communities, family and individually owned farms are central to the vitality of the regional economy, as dollars paid to small farmers tend to recirculate in the local community.

Land Use and Regional Agriculture

Land Use

If we do not live in a farming community, reading about the loss of farms and the effect on rural communities is like reading any set of statistics – the problem remains outside our own personal experience and appears to be out of our control. But, farming is more than a livelihood for individuals. Agriculture is a *land use*, and food production is inextricably tied to place. As the business of agriculture fluctuates, and the economic viability of farming changes, so does the landscape.

The ways that land is used affects all of us, whether we live in rural communities, in urban centers, suburbs, or on the urban fringe. The way land is used can affect the local economy, quality of life, natural resources, and food security.

Local Economy & Quality of Life

While the number of farmers continues to decrease, the share of the economy represented by the food system continues to increase. So, in spite of the shrinking agricultural sector, nearly 20% of our nation's workforce is connected in some way with food. Farmland is a strategic resource, fundamental to our nation's security. Fertile soils, temperate climate, and available water have helped the U.S. become the most productive agricultural nation in the world. America has 7% of the world's tillable land but produces 13% of the world's food supply. On a national scale, agriculture supports the food manufacturing

industry which is the largest manufacturing sector in the U.S. economy.

In many regions, agriculture is the base of the economy. Landscapes with scenic farmland provide opportunities for tourism and outdoor recreation, which can contribute to the local economy. When farms go out of business, an average of 3-5 other jobs are lost in the community. If enough farms fail, businesses that support agriculture cannot be sustained. As displaced workers leave to seek other employment, the rural population decreases, and nonagricultural businesses become less viable as well.

For the farmers who remain, farming becomes more difficult and expensive. When former farmland is parceled and developed for residential or commercial uses, land values rise, which can increase a farmer's property taxes. Many businesses that provide services to farmers are no longer viable, and inputs for farming need to be purchased from more distant suppliers. The countryside's new inhabitants often do not understand farming, and sometimes file nuisance lawsuits because of unpleasant odors or noisy farm machinery.

When farms go out of business or farmland is sold for residential or commercial development, it affects the whole community. New development, while it may seem like a bonus for new tax revenue, is a drain on the local economy, because the cost of infrastructure (roads, sanitation, schools, and other services) is often greater than the new tax revenue generated. In contrast, existing farmland usually provides a tax surplus for communities. As cities sprawl into the countryside, urban infrastructure is often neglected as financial resources relocate to the

urban fringe, which tends to attract more affluent residents. People living on the urban fringe become more dependent on personal automobiles, and there is less incentive for maintaining public transportation systems in the urban core. Traffic congestion increases and air quality declines as people commute further and further to work.

Natural Resources

Farmland provides benefits associated with open space, including water retention and recharge and protection for natural resources such as timber and wildlife habitat. Residential and commercial development of farmland can therefore have negative implications for water quality, flood control, and wildlife populations.

Community Food Security

How we choose to use land in and around our communities has an impact on the security of the local food supply. As we squeeze farms and farmland out of our communities, we become increasingly dependent on food that is produced *elsewhere*. We take for granted that there will always be a cheap and abundant supply of fuel for producing, packaging and transporting food across the country and across the world.

When sprawling suburban development pulls resources from downtowns, supermarkets often move closer to new residential markets. Fleeing supermarkets often leave lower income urban residents without access to a variety of reasonably priced foods. Small and medium sized farms are more likely to sell their produce directly to consumers at farmers' markets than are large farm operations. As the smaller farms go out of business, a source of locally grown fresh produce is lost for rural

and urban dwellers alike. The traditional ties between producers and consumers can be broken.

According to the American Farmland Trust, more than half of America's food production takes place in metropolitan counties, in counties adjacent to major cities, and in counties with high population growth. Ninety percent of the U.S. population lives in these 1549 counties, and the farms in these counties account for a large percentage of the nation's food output, including 86% of fruits and 87% of vegetables, and 79% of milk. *Where do we want our food to come from?* A loss of regional agriculture represents a loss of regional food security.

Protecting Farmland & Sustaining Farms

Many communities have begun taking steps to protect farmland. Examples include agricultural zoning, creating agricultural districts, purchasing development rights, tax reform, and conservation easements. However, to sustain farms on a grander scale, farming must be economically viable. One of the best ways to protect farmland is to increase the profitability of farming, and to increase the stability of farmers' incomes. Direct marketing is becoming a popular way to increase and stabilize farmers' incomes. Direct marketing means that a farmer is selling directly to the consumer at retail—rather than wholesale—prices. This enables farmers to earn higher profits. Some farmers are able to minimally process foods to increase convenience for the individuals, organizations, or institutions that purchase them. Many farmers have tried adding value to foods by processing and packaging them before they leave the farm.



Other farmers generate income by allowing others access to their farms for educational and recreational pursuits. When people visit farms and learn more about agriculture, their appreciation for farming is enhanced.

The Regional and Seasonal Food Supply

Members of communities can demonstrate the value they place on local agriculture by purchasing foods that are locally produced and/or processed, and by increasing their reliance on the foods that are produced in their region during the seasons they are available. Many foods such as milk, meat, poultry, fish, eggs, beans, and grains are available year round in most regions. In Southern and West Coast climates, a variety

of fruits and vegetables is also available year round. In other geographic regions, such as the Northeast or Midwest, the bulk of familiar fruits and vegetables are harvested in Summer and Fall. Some fruits and vegetables including apples, pears, potatoes, cabbage, carrots, and other root crops can be stored for several months and eaten fresh in the winter. Some vegetables even grow well in the winter. The season that various foods are available depends upon your region. Your state's department of agriculture, land grant university, or your county's Cooperative Extension office can provide information about the seasonal availability of fresh produce, about farms that sell directly to consumers and institutions, and about the locations of farmers' markets. See the resources in the back of this guide for help finding out what is in season in your region.

Notes:

Dialogue About Farm to School

let's talk....

What is the biggest school food service hurdle you have jumped this year?



What is the biggest problem you continue to face in your school food service?

Ignoring all obstacles, describe your vision for the perfect school food service...



Where does school lunch come from?

List the sources of food for your school lunch program...



In your school district, what stands in the way of implementing a farm to school program?

Make a list of individuals or groups who might be able to help you overcome obstacles...



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Farm to School Resources

Farm to School Guides, Information & Curricula:

Cornell University Farm to School Program
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<http://www.oxfamamerica.org/youth/art1767.html>.

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United States Department of Agriculture
<http://www.usda.gov>

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<http://schoolmeals.nal.usda.gov/Recipes/index.html>

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Publication: Bringing Local Food to Local People: A Resource Guide for Farm-to-School and Farm-to-Institution Programs

The Center for Commercial-Free Public Education
<http://www.commercialfree.org/commercialism.html>

Center for Ecoliteracy
<http://www.ecoliteracy.org>

The Center for Food and Justice:
<http://departments.oxy.edu/uepi/cfj>
http://departments.oxy.edu/uepi/cfj/cfj_LA_sodaban.htm
http://departments.oxy.edu/uepi/cfj/cfj_LA_healthyschoolfood.htm
www.farmtoschool.org

Center for Integrated Agricultural Systems (CIAS)
<http://www.wisc.edu/cias>

Chef’s Collaborative
www.chefscollaborative.org

Community Alliance with Family Farmers (CAFF)
<http://www.caff.org>

Organizations:

American Dietetic Association
<http://www.eatright.org>
ADA Hunger and Environmental Nutrition Practice Group
<http://www.HENdpg.org>

American Farmland Trust
<http://www.farmland.org/>

American Obesity Association
<http://www.obesity.org>

American School Food Service Association
<http://www.asfsa.org>

Community Food Security Coalition

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

Publications of Interest:

1. Community Food Security Resource Kit: How to Find Money, Technical Assistance, and

Other Help to Fight Hunger and Strengthen Local Food Systems, Free, \$4 shipping

2. Healthy Farms, Healthy Kids: Evaluating the Barriers and Opportunities for Farm to School Programs, \$12 plus \$4 shipping

3. Getting Food on the Table: An Action Guide to Local Food Policy, \$10 plus \$4 shipping

For a full posting of CFSC's National Farm to College Research Report:

www.foodsecurity.org/farm_to_college.html

Community Involved in Sustaining Agriculture (CISA) cisa@buylocalfood.com

<http://www.buylocal.com>

Cornell Food Project

http://www.nysaes.cornell.edu/cifs/ift_international/FoodProject2.html

Food Circles Networking Project

<http://www.foodcircles.missouri.edu>

Food Systems Project

<http://www.foodsystems.org>

Food Routes Network (Resources and farmer locator)

<http://www.foodroutes.org/index.jsp>

<http://www.foodroutes.org/farmtoschool.jsp>

<http://www.foodroutes.org/farmtocollege.jsp>

<http://www.foodroutes.org/f2cmaterials.jsp>

(log in required)

Hartford Food System

<http://www.hartfodfood.org>

Just Food

<http://www.justfood.org>

Leopold Center for Sustainable Agriculture

<http://www.leopold.iastate.edu>

North American Farm Direct Marketing Association

<http://www.nafdma.com>

Northeast Sustainable Agriculture Working Group

<http://www.smallfarm.org/nesawg/nesawg.html>

Practical Farmers of Iowa

<http://www.pfi.iastate.edu>

http://www.pfi.iastate.edu/Local_Food_Syst/local_food_systems.htm

<http://www.ialocalfood.org>

(Local Food Connections: From Farms to Schools, Located at: [http://](http://www.exnet.iastate.edu/Publications/PM1853A.pdf)

www.exnet.iastate.edu/Publications/PM1853A.pdf)

Local Harvest (Farmer locator)

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

Ram's Horn

<http://www.ramshorn.bc.ca>

Slow Food

<http://www.slowfood.com/>

The Society for Nutrition Education

<http://www.sne.org>

(See Sustainable Food Systems Division)

Regional Resources for Farm to School

Northeast:

Northeast Regional Food Guide

<http://www.nutrition.cornell.edu/FoodGuide/>

Southwest:

Southwest Marketing Network

<http://www.swmarketing.ncat.org>

By State:

California:

California Food Policy Advocates

<http://www.cfpa.net>

California Farm-to-School Program

ments.oxy.edu/uepi/cfj/

cfj_californiafarm2school.htm <http://>

departments.oxy.edu/uepi/cfj/

cfj_californiafarm2school.htm

Community Alliance for Family Farmers

<http://www.caff.org>

Publication:

The Crunch Lunch Program and Local Farmers: Establishing a Working Relationship.

by Paul Buseck, Cralan Deustch, Kim Hunter, Tree Kilpatrick, Jen Mayer, Michiko Sugawara and Culley Thomas, Spring 2002

Environmental Education Council of Marin School Food Project

www.eecom.net/projects_school.htm <http://>

www.eecom.net/projects_school.htm

Center for Ecoliteracy

<http://www.ecoliteracy.org>

Ecology Center Farm Fresh Program

[html http://www.ecologycenter.org/ffc/ffc.html](http://www.ecologycenter.org/ffc/ffc.html)

UC SAREP

<http://www.sarep.ucdavis.edu/news/0104apr.htm>



District of Columbia:

Washington DC Home Grown Food
<http://www.dcfood.org>

Iowa:

Grown Locally: Goods Raised only with Nature
<http://www.grownlocally.com>

The Iowa State University Hotel, Restaurant, and Institution Management
<http://www.extension.iastate.edu/hrim/Publications/>
Publications:
Local Food Connections: Foodservice Considerations at web site
<http://www.extension.iastate.edu/Publications/PM1853C.pdf>
Local Food Connections: From Farms to Schools
<http://www.extension.iastate.edu/Publications/PM1853A.pdf>

Iowa Food Policy Council
<http://www.iowafoodpolicy.org/index.htm>.

Community Food Systems Project of Practical Farmers of Iowa.
http://www.pfi.iastate.edu/Local_Food_Syst/Field_to_family.htm

University of Northern Iowa's Center for Energy and Environmental Education's Local Food Project:
<http://www.uni.edu/ceee/foodproject>

Pennsylvania:

AgMap: Pennsylvania's Online Agricultural Directory
<http://agmap.psu.edu>

Pennsylvania Simply Delicious (Find a Grower)
http://sites.state.pa.us/PA_Exec/Agriculture/simply/index.htm

Pennsylvania Agricultural Statistics Service
<http://www.nass.usda.gov/pa/>

Pennsylvania Agriculture in the Classroom
<http://www.cas.psu.edu/docs/CASPROF/agclassroom/agclassroom.html>

Pennsylvania Association for Sustainable Agriculture
<http://www.pasafarming.org/>

Pennsylvania Department of Agriculture
<http://www.pda.state.pa.us/>
http://sites.state.pa.us/PA_Exec/Agriculture/

Pennsylvania Department of Education
http://www.pde.state.pa.us/pde_internet/site/default.asp

Pennsylvania Department of Education Food and Nutrition Programs
http://www.pde.state.pa.us/food_nutrition/site/default.asp

Pennsylvania Department of Environmental Protection
<http://www.dep.state.pa.us/>

Pennsylvania School Food Service Association
<http://www.psfsa.org/>

Project PA: Best Practices Manual
http://nutrition.psu.edu/projectpa/html/BP_Manual_link.html

Sustaining Pennsylvania Agriculture
<http://susag.cas.psu.edu/>

Pennsylvania Retail Farm Market Association
<http://www.PaFarm.com>

Rodale Institute: The New Farm
<http://www.newfarm.org>

Minnesota:

Minnesota Department of Agriculture Direct Marketing Information

Sale of meat and poultry products to grocery stores and restaurants
<http://www.mda.state.mn.us/dairyfood/saleofmeatpoultry.htm>

Sale of Shell Eggs to Grocery Stores
<http://www.mda.state.mn.us/dairyfood/factsheets/eggsafety.htm>

Providing Safe Locally-Grown Produce to Commercial Food Establishments
<http://www.mda.state.mn.us/dairyfood/safelocalproduce.htm>

Nebraska:

Nebraska Institute of Agriculture and Natural Resources: Food Marketing and Processing FoodMap
www.foodmap.unl.edu/index.asp

New Hampshire:

University of New Hampshire Office of Sustainability Programs
<http://www.sustainableunh.unh.edu>

New Mexico:

Farm to Table
3900 Paseo del Sol
Santa Fe, NM 87507
505-473-1004
505-424-1144 fax

New York:

Cornell Farm to School Program
<http://www.cce.cornell.edu/farmtoschool/>

New York State Fruit and Vegetable Harvest Calendar
<http://www.agmkt.state.ny.us/HarvestCalendar.html>
Cornell's Small Ruminant Marketing Program
<http://www.sheepgoatmarketing.org/sgm/index.html>

Regional Farm and Food Project, Albany NY
<http://www.capital.net/~farmfood/>

Agriculture Economic Development Program
Washington & Saratoga Counties
<http://www.aedpws.org>

Earth Pledge
<http://www.earthpledge.org>
<http://www.farmtotable.org>

Cornell University Farm-to-School Initiative
81 http://www.cals.cornell.edu/agfoodcommunity/afs_temp2.cfm?topicID=81

North Carolina:

Appalachian Sustainable Agriculture Project
<http://www.BuyAppalachian.org>

Ohio:

Oberlin College Local Foods
<http://www.oberlin.edu/cdsrecyc/localfoods>

Oklahoma:

Oklahoma Food
<http://www.oklahomafood.org>

Oklahoma Food Policy Council, c/o Kerr
Center for Sustainable Agriculture
<http://www.kerrcenter.com>

Made in Oklahoma, Oklahoma Department of
Agriculture Market Development Services
<http://www.madeinoklahoma.net>

Oregon:

Ecotrust
<http://www.ecotrust.org/>

Food For Thought Café
<http://www.fftcafe.org>

The Food Alliance
<http://www.thefoodalliance.org/index.html>

Washington:

Seasonal Harvest Guide
<http://www.whatcom.wsu.edu/family/facts/harvestchart.htm>

Tilth Producers
<http://www.tilthproducers.org>

Sound Foodshed, Thurston County
<http://www.soundfoodshed.org>

Wisconsin:

Wisconsin Homegrown Lunch
<http://www.reapfoodgroup.org/farmtoschool/who.shtml>

Center for Integrated Agricultural Systems
(CIAS) *Farm Fresh Atlas*
<http://www.wisc.edu/cias>

Vermont:

NOFA Vermont
<http://www.nofavt.org/sht14.cfm>

Vermont FEED (web site coming soon)

***This is just a sampling of the resources that exist to help with your farm to school program. Many of these state specific resources will be helpful to you even if you live in another state or a state that is not listed.*